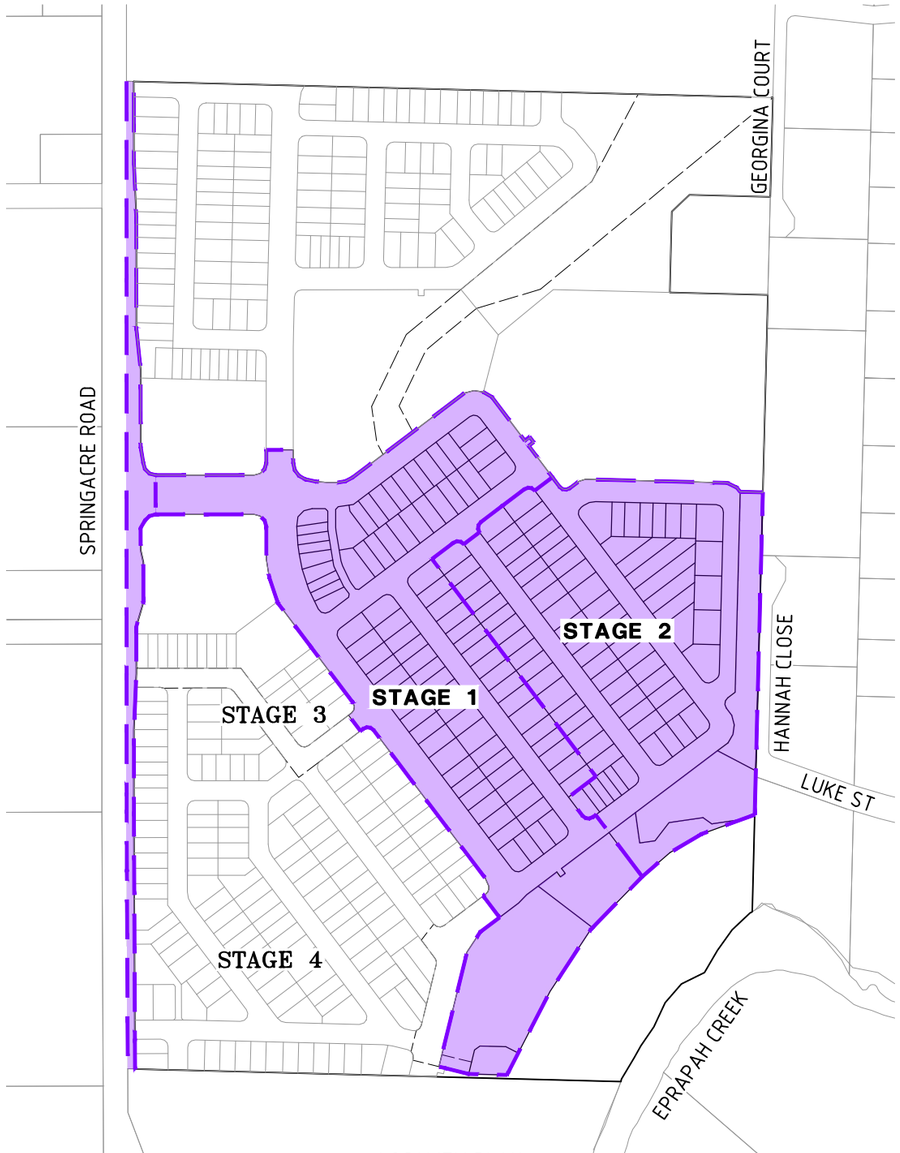
Attachment E
Revised Civil Engineering Drawings

URBEX PTY LTD

SPRINGACRE RD, THORNLANDS, QLD, 4164

SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL APPLICATION

KEY PLAN
SCALE 1:25000 (A1)



LOCALITY PLAN
SCALE 1:2500 (A1)

DRAWING INDEX

SHEET NUMBER	REVISION	SHEET TITLE
GENERAL ARRANGEMENT		
B00702-DA-CG01	C	TITLE SHEET, LOCALITY PLAN AND DRAWING INDEX
B00702-DA-CG02	C	STAGING PLAN
B00702-DA-CG03	C	GENERAL ARRANGEMENT PLAN - SHEET 1 OF 2
B00702-DA-CG04	C	GENERAL ARRANGEMENT PLAN - SHEET 2 OF 2
B00702-DA-CG05	C	TYPICAL DETAILS
EXISTING FEATURES		
B00702-DA-EF01	C	EXISTING FEATURES LAYOUT PLAN
EARTHWORKS MANAGEMENT		
B00702-DA-CE01	F	OVERALL EARTHWORKS LAYOUT PLAN
B00702-DA-CE02	C	EARTHWORKS DETAILED LAYOUT PLAN - SHEET 1 OF 4
B00702-DA-CE03	C	EARTHWORKS DETAILED LAYOUT PLAN - SHEET 2 OF 4
B00702-DA-CE04	C	EARTHWORKS DETAILED LAYOUT PLAN - SHEET 3 OF 4
B00702-DA-CE05	C	EARTHWORKS DETAILED LAYOUT PLAN - SHEET 4 OF 4
B00702-DA-CE06	C	EARTHWORKS - CROSS SECTIONS - SHEET 1 OF 2
B00702-DA-CE07	C	EARTHWORKS - CROSS SECTIONS - SHEET 2 OF 2
B00702-DA-RW01	C	RETAINING WALL - TYPICAL DETAILS - SHEET 1 OF 2
B00702-DA-RW02	C	RETAINING WALL - TYPICAL DETAILS - SHEET 2 OF 2
ROADWORKS		
B00702-DA-CR01	C	ROAD NETWORK LAYOUT
B00702-DA-CR02	C	ROAD NETWORK SECTIONS
B00702-DA-CR03	C	ROAD AND DRAINAGE PLAN - SHEET 1 OF 2
B00702-DA-CR04	C	ROAD AND DRAINAGE PLAN - SHEET 2 OF 2
B00702-DA-CR06	C	ENTRY ROAD INTERSECTION DETAIL
B00702-DA-CR07	C	ENTRY ROAD SECTIONS
B00702-DA-CR08	C	ROAD LONGITUDINAL SECTION - SHEET 1 OF 6
B00702-DA-CR09	C	ROAD LONGITUDINAL SECTION - SHEET 2 OF 6
B00702-DA-CR10	C	ROAD LONGITUDINAL SECTION - SHEET 3 OF 6
B00702-DA-CR11	C	ROAD LONGITUDINAL SECTION - SHEET 4 OF 6
B00702-DA-CR12	C	ROAD LONGITUDINAL SECTION - SHEET 5 OF 6
B00702-DA-CR13	C	ROAD LONGITUDINAL SECTION - SHEET 6 OF 6
STORMWATER DRAINAGE		
B00702-DA-SW01	C	PRE DEVELOPMENT CATCHMENT PLAN
B00702-DA-SW02	C	POST DEVELOPMENT CATCHMENT PLAN
B00702-DA-SW03	C	STORMWATER QUALITY CATCHMENT PLAN
BIORETENTION DETAILS		
B00702-DA-CB01	C	BIORETENTION BASIN A2 AND A3 LAYOUT PLAN
B00702-DA-CB02	C	BIORETENTION BASIN A2 AND A3 CROSS SECTIONS
B00702-DA-CB03	C	BIORETENTION BASIN B2 LAYOUT PLAN
B00702-DA-CB04	C	BIORETENTION BASIN B2 CROSS SECTIONS
TURN TEMPLATE		
B00702-DA-CT01	C	TURNING TEMPLATE - DESIGN VEHICLE 14.5m BUS - SHEET 1 OF 4
B00702-DA-CT02	C	TURNING TEMPLATE - DESIGN VEHICLE 14.5m BUS - SHEET 2 OF 4
B00702-DA-CT03	C	TURNING TEMPLATE - DESIGN VEHICLE 14.5m BUS - SHEET 3 OF 4
B00702-DA-CT04	C	TURNING TEMPLATE - DESIGN VEHICLE 14.5m BUS - SHEET 4 OF 4
B00702-DA-CT05	C	TURNING TEMPLATE - CHECK VEHICLE 19m SEMI TRUCK - SHEET 1 OF 2
B00702-DA-CT06	C	TURNING TEMPLATE - CHECK VEHICLE 19m SEMI TRUCK - SHEET 2 OF 2
B00702-DA-CT07	C	TURNING TEMPLATE - SERVICE VEHICLE 10.3m TRUCK - SHEET 1 OF 4
B00702-DA-CT08	C	TURNING TEMPLATE - SERVICE VEHICLE 10.3m TRUCK - SHEET 2 OF 4
B00702-DA-CT09	C	TURNING TEMPLATE - SERVICE VEHICLE 10.3m TRUCK - SHEET 3 OF 4
B00702-DA-CT10	C	TURNING TEMPLATE - SERVICE VEHICLE 10.3m TRUCK - SHEET 4 OF 4
B00702-DA-CT11	C	TURNING TEMPLATE - DESIGN VEHICLE 5.2m CAR
SEWERAGE RETICULATION		
B00702-DA-CS01	C	CONCEPT SEWER RETICULATION PLAN - SHEET 1 OF 2
B00702-DA-CS02	C	CONCEPT SEWER RETICULATION PLAN - SHEET 2 OF 2
WATER RETICULATION		
B00702-DA-CW01	C	CONCEPT WATER RETICULATION PLAN - SHEET 1 OF 2
B00702-DA-CW02	C	CONCEPT WATER RETICULATION PLAN - SHEET 2 OF 2
COMBINED SERVICES		
B00702-DA-CM01	C	COMBINED SERVICES PLAN - SHEET 1 OF 2
B00702-DA-CM02	C	COMBINED SERVICES PLAN - SHEET 2 OF 2
B00702-DA-CM03	C	COMBINED SERVICES PLAN - TYPICAL DETAILS

DEVELOPMENT SUMMARY

ESTATE NAME: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
LOCATION: SPRINGACRE RD, THORNLANDS, QLD, 4164
TOTAL AREA: 10.6 Ha

NAME OF AUTHORITY REF. No.

LOCAL AUTHORITY : REDLAND CITY COUNCIL

PROPERTY DESCRIPTION

LOTS 12-14 &16 on RP53653
LOT 2 on RP128089
PARISH OF CLEVELAND
COUNTY OF STANLEY

SURVEY ORIGIN

PSM 79006 RL 67.474
DATUM AHD
SURVEYOR
REFER TO THE RPS GROUP CONTROL PLAN-AU011113-2A
REDLAND CC LEVELLING 2012-16 LEAD 161

REVISION: C DATE: 19/06/26

NOTE:
INDICATIVE STAGING ORDER SHOWN. ORDER MAY CHANGE DEPENDING ON TIMING OF EXTERNAL INFRASTRUCTURE REQUIREMENTS.

0 50 100 150 200 250m
50 37.5 25 12.5
SCALE 1:2500 (A1) 1:5000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

0 500 1000 1500 2000 2500m
500 375 250 125
SCALE 1:25000 (A1) 1:50000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

Datum
AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702
Drawing No. DA-CG01
Rev C

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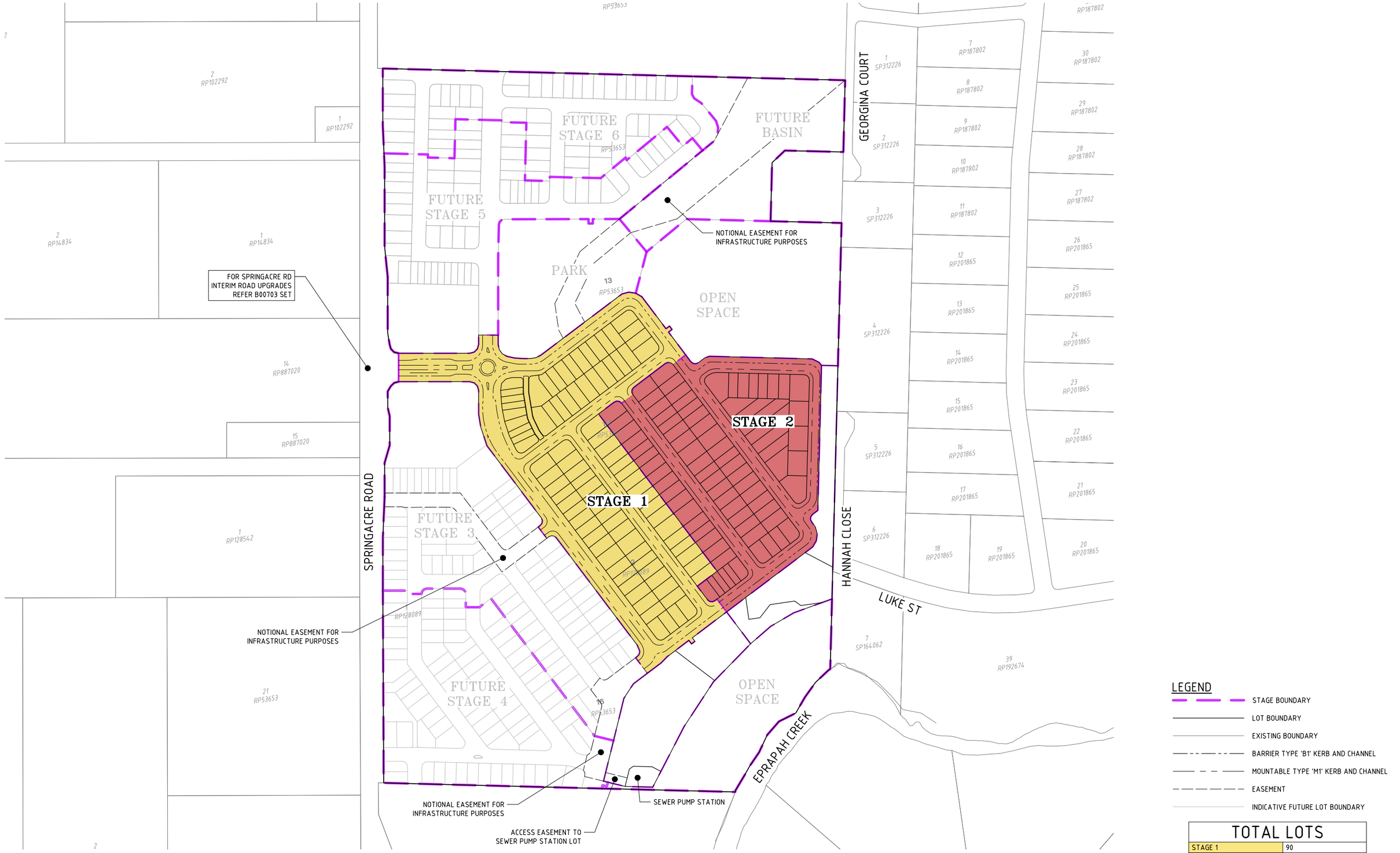

LEGEND

- STAGE BOUNDARY
- LOT BOUNDARY
- EXISTING BOUNDARY
- BARRIER TYPE 'B1' KERB AND CHANNEL
- MOUNTABLE TYPE 'M1' KERB AND CHANNEL
- EASEMENT
- INDICATIVE FUTURE LOT BOUNDARY

TOTAL LOTS	
STAGE 1	90
STAGE 2	79
TOTAL	169

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingleman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client URBEX PTY LTD
Project SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title STAGING PLAN

Datum AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702
Drawing No. DA-CG02
Rev C

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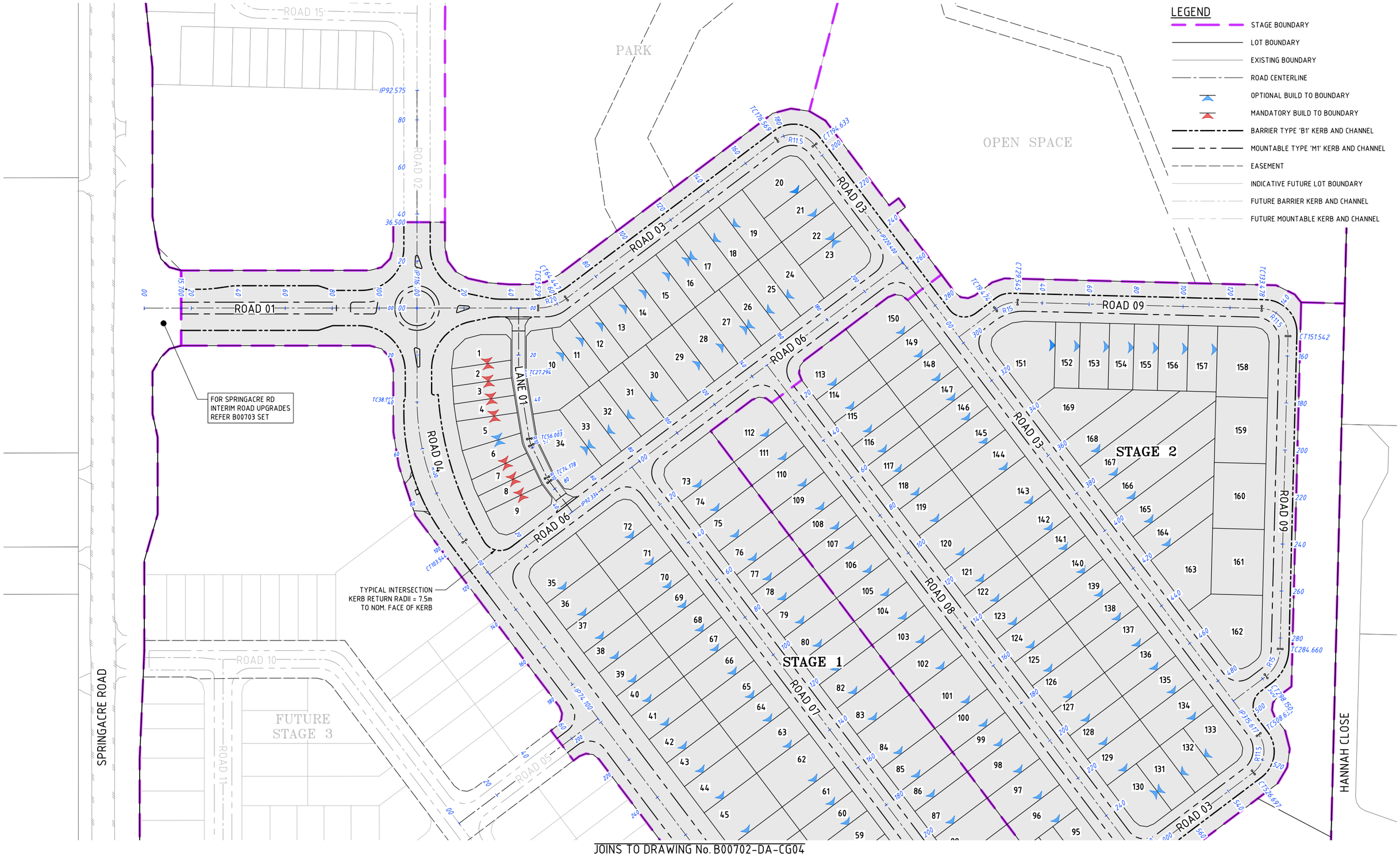

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingleman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: GENERAL ARRANGEMENT PLAN SHEET 1 OF 2

Datum: AHD PSM 79006 RL 67.474 (RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CG03 | Rev C

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JOINS TO DRAWING No. B00702-DA-CG03

STAGE 1

FUTURE STAGE 3

FUTURE STAGE 4

SPRINGACRE ROAD

HANNAH CLOSE

ROAD 10

ROAD 11

ROAD 12

ROAD 13

ROAD 14

ROAD 04

ROAD 05

ROAD 07

ROAD 03

BASIN A

BIO A

BASIN B

BIO B

OPEN SPACE

SEWER PUMP STATION

LEGEND

- STAGE BOUNDARY
- LOT BOUNDARY
- EXISTING BOUNDARY
- ROAD CENTERLINE
- OPTIONAL BUILD TO BOUNDARY
- MANDATORY BUILD TO BOUNDARY
- BARRIER TYPE 'B1' KERB AND CHANNEL
- MOUNTABLE TYPE 'M1' KERB AND CHANNEL
- EASEMENT
- INDICATIVE FUTURE LOT BOUNDARY
- FUTURE BARRIER KERB AND CHANNEL
- FUTURE MOUNTABLE KERB AND CHANNEL

0 15 30 45 60 75m

15 11.25 7.5 3.75

SCALE 1:750 (A1) 1:1500 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: GENERAL ARRANGEMENT PLAN
SHEET 2 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CG04 | Rev C

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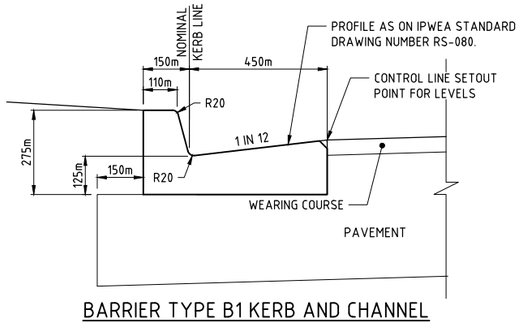
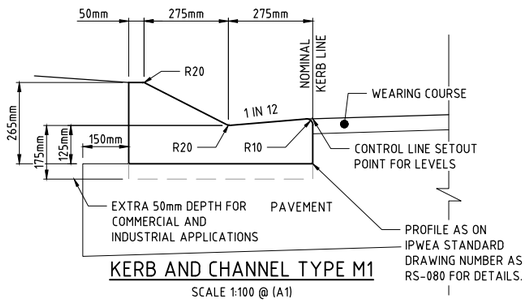


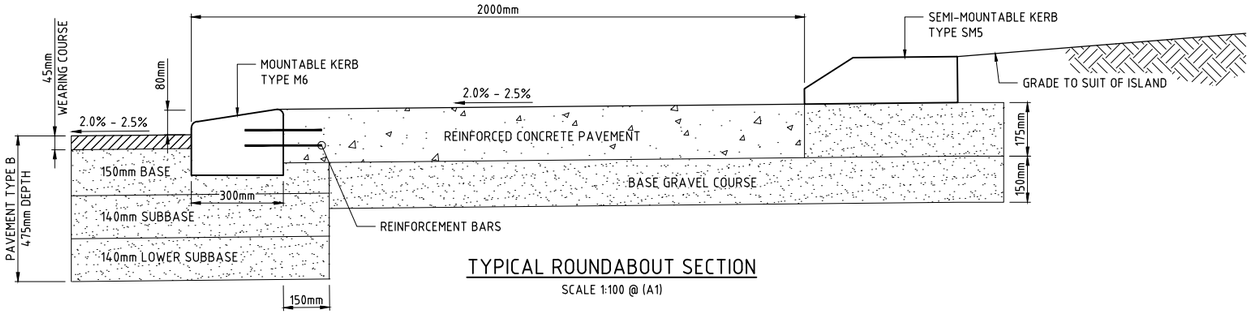
BARRIER TYPE B1 KERB AND CHANNEL

AS PER IPWEA STD DWG RS-080 (AS ADOPTED BY REDLAND CITY COUNCIL'S PS POLICY)
N.T.S.



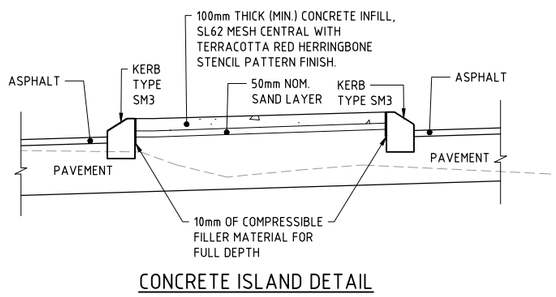
KERB AND CHANNEL TYPE M1

SCALE 1:100 @ (A1)



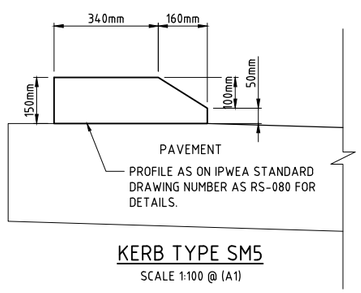
TYPICAL ROUNDABOUT SECTION

SCALE 1:100 @ (A1)



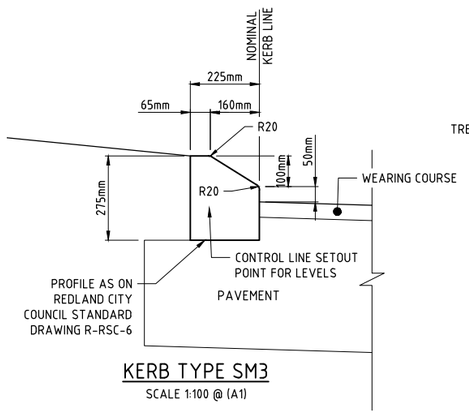
CONCRETE ISLAND DETAIL

N.T.S.



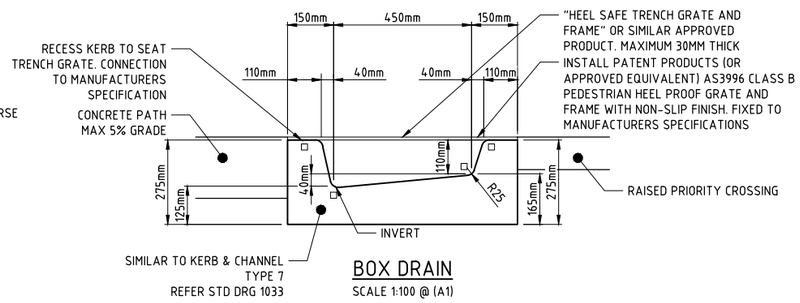
KERB TYPE SM5

SCALE 1:100 @ (A1)



KERB TYPE SM3

SCALE 1:100 @ (A1)



BOX DRAIN

SCALE 1:100 @ (A1)

0 2 4 6 8 10m
2.0 1.5 1.0 0.5
SCALE 1:100 (A1) 1:200 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Engelman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: TYPICAL DETAILS

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CG05 | Rev C

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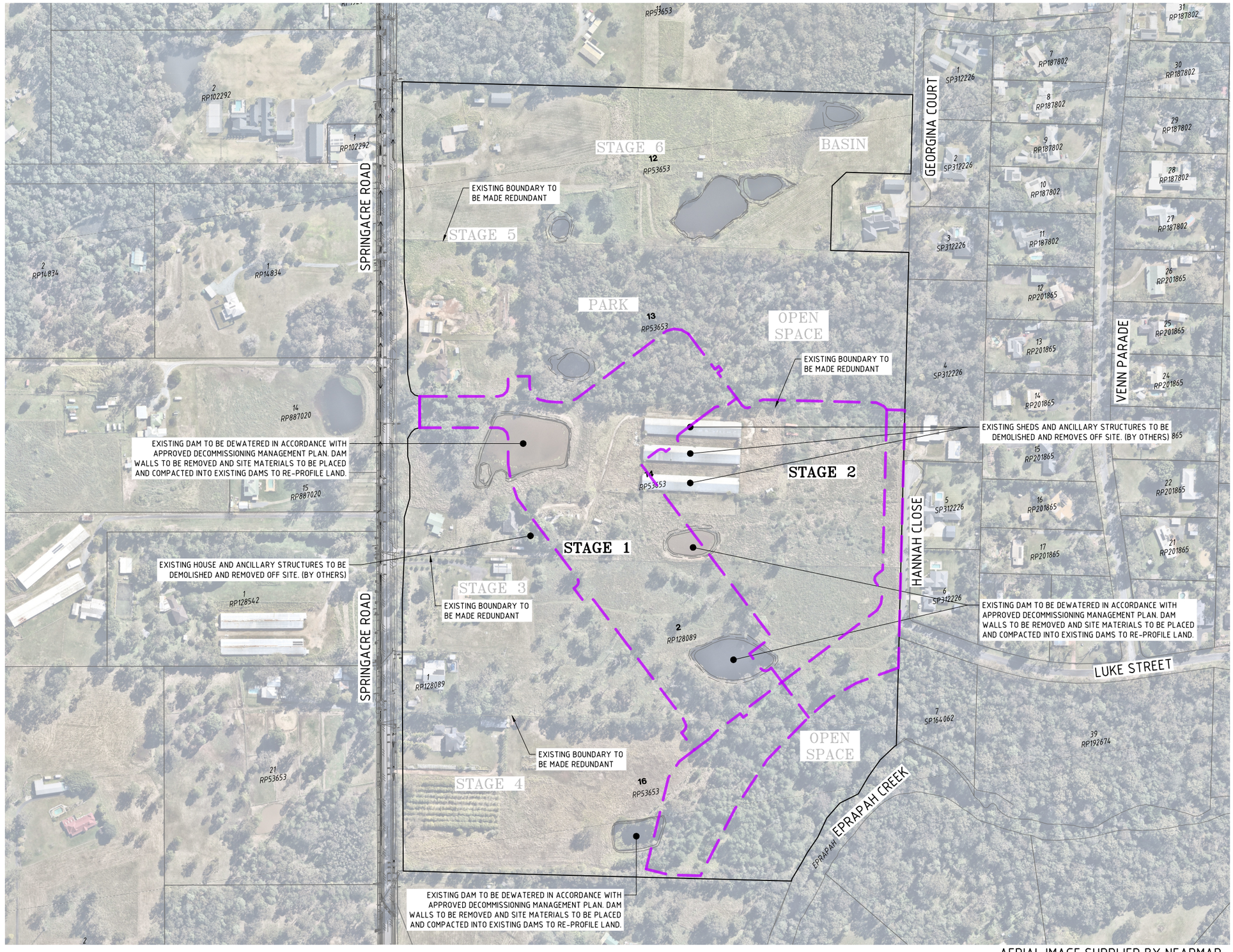

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingleman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: EXISTING FEATURES LAYOUT PLAN

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-EF01 | Rev C

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User: ETHAN SCHAFER

Docusign Envelope ID: 2FE5ADC6-F681-8018-819E-9CAA8E712BB0

LEGEND

- FINISHED SURFACE CONTOURS (0.25m INTERVALS)
- LOT BOUNDARY
- TOP OF BATTER
- TOE OF BATTER
- OPEN CHANNEL
- BARRIER TYPE 'B1' KERB AND CHANNEL
- MOUNTABLE TYPE 'M1' KERB AND CHANNEL
- EASEMENT

PROPOSED EARTHWORKS

EARTHWORKS DEPTH RANGE
tin EXISTING TO tin DESIGN (0.25m INTERVALS)

- FILL 1.75m +
- FILL 1.50m - 1.75m
- FILL 1.25m - 1.50m
- FILL 1.00m - 1.25m
- FILL 0.75m - 1.00m
- FILL 0.50m - 0.75m
- FILL 0.25m - 0.50m
- FILL 0.00m - 0.25m
- CUT 0.00m - 0.25m
- CUT 0.25m - 0.50m
- CUT 0.50m - 0.75m
- CUT 0.75m - 1.00m
- CUT 1.00m - 1.25m
- CUT 1.25m - 1.50m
- CUT 1.50m - 1.75m
- CUT 1.75m +

FUTURE EARTHWORKS

BULK EARTHWORKS OPERATIONS MAY OCCUR IN THESE AREAS AS REQUIRED WITH FINAL LEVELS SUBJECT TO DETAILED DESIGN

STAGE 1

STAGE 2

OPEN SPACE

PARK

ROAD 01 · ROAD 02 · ROAD 03 · ROAD 04 · ROAD 06 · ROAD 07 · ROAD 08 · ROAD 09 · ROAD 10 · ROAD 11 · ROAD 12 · ROAD 13 · ROAD 14 · ROAD 15 · ROAD 16 · ROAD 17 · ROAD 18 · ROAD 19 · LANE 01 · DWAY 01

E1 CE06 · E2 CE06 · E3 CE06 · E4 CE06 · E5 CE06 · E6 CE07 · E7 CE07

PROPOSED EARTHWORKS REFER NOTES IN LEGEND

FUTURE EARTHWORKS REFER NOTES IN LEGEND

NOTIONAL EASEMENT FOR INFRASTRUCTURE PURPOSES

TREE RETENTION SUBJECT TO ARBORIST APPROVAL

EARTHWORKS IN PARK SUBJECT TO FINAL PARK DESIGN

SPRINGACRE ROAD

SCALE 1:1250 (A1) 1:2500 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
F	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
E	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	PDW	PDW	PI	PI	18/06/26
D	CLEARING EXTENTS AMENDED WITHIN PARK	PDW	PDW	PI	PI	01/06/26
C	CLEARING EXTENTS AMENDED	PDW	PDW	PI	PI	07/05/26
B	RESPONSE TO EDQ RFI	PDW	PDW	PDW	PI	02/04/26

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX · EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: EARTHWORKS OVERALL LAYOUT PLAN

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 · Drawing No. DA-CE01 · Rev F

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User: ETHAN SCHAFER

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FOR SPRINGACRE ROAD
INTERIM ROAD UPGRADE
REFER TO B00703 SET

SPRINGACRE ROAD

ROAD 01

ROAD 02

ROAD 03

ROAD 04

ROAD 05

ROAD 06

ROAD 07

LANE 01

PARK

LEGEND

- FINISHED SURFACE CONTOURS (0.25m INTERVALS) — 57.50
- LOT BOUNDARY
- TOP OF BATTER
- TOE OF BATTER
- RETAINING WALL
- OPEN CHANNEL
- BARRIER TYPE 'B1' KERB AND CHANNEL
- MOUNTABLE TYPE 'M1' KERB AND CHANNEL
- EASEMENT
- CUT FILL LABEL — 29.945 / +0.828
- PAD RL LABEL — PAD RL 30.300
- PROPOSED AREAS OF FILL
- PROPOSED AREAS OF CUT
- RETAINING WALL 0.0m–1.5m
- RETAINING WALL 1.5m–2.0m
- RETAINING WALL 2.0m–2.5m
- SANDSTONE BOULDER RETAINING WALL

NOTE:
ALL PRECINCT 1 EARTHWORKS SHOWN. STAGE 1 AND 2 WORKS PROPOSED WITH TEMPORARY EARTHWORKS TO TIE INTO EXISTING AS DETERMINED AT THE DETAIL DESIGN PHASE OF THE PROJECT

JOINS DRAWING NUMBER B00702-DA-CE04

JOINS DRAWING NUMBER B00702-DA-CE03

SCALE 1:500 (A1) 1:1000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: EARTHWORKS DETAILED LAYOUT PLAN SHEET 1 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CE02 | Rev C

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Plot Date: 19/06/2026 12:16:56 PM
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User: ETHAN SCHAFER

Docusign Envelope ID: 2FE5ADC6-F681-8018-819E-9CAA8E712BB0

NOTE:
ALL PRECINCT 1 EARTHWORKS SHOWN. STAGE 1 AND 2 WORKS PROPOSED WITH TEMPORARY EARTHWORKS TO TIE INTO EXISTING AS DETERMINED AT THE DETAIL DESIGN PHASE OF THE PROJECT

LEGEND

- FINISHED SURFACE CONTOURS (0.25m INTERVALS)
- LOT BOUNDARY
- TOP OF BATTER
- TOE OF BATTER
- RETAINING WALL
- OPEN CHANNEL
- BARRIER TYPE 'B1' KERB AND CHANNEL
- MOUNTABLE TYPE 'M1' KERB AND CHANNEL
- EASEMENT
- CUT FILL LABEL
- PAD RL LABEL
- PROPOSED AREAS OF FILL
- PROPOSED AREAS OF CUT
- RETAINING WALL 0.0m-1.5m
- RETAINING WALL 1.5m-2.0m
- RETAINING WALL 2.0m-2.5m
- SANDSTONE BOULDER RETAINING WALL

PARK

OPEN SPACE

STAGE 2

ROAD 03

ROAD 06

ROAD 08

ROAD 07

ROAD 09

LANE 01

JOINS DRAWING NUMBER B00702-DA-CE02

JOINS DRAWING NUMBER B00702-DA-CE05

SCALE 1:500 (A1) 1:1000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: EARTHWORKS DETAILED LAYOUT PLAN SHEET 2 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CE03 | Rev C

Plot Date: 19/06/2026 12:17:04 PM
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User: ETHAN SCHAFER

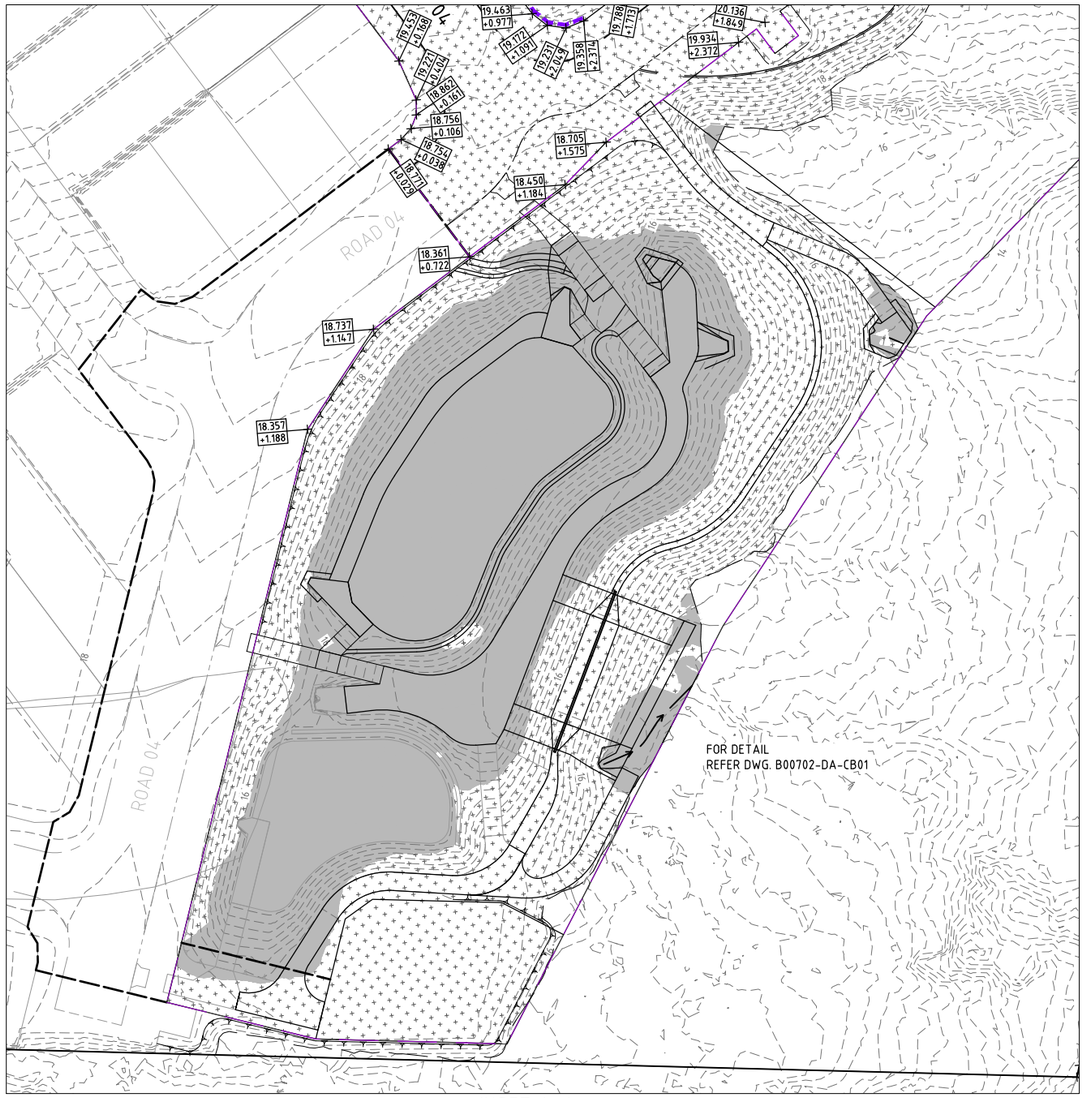
Docusign Envelope ID: 2FE5ADC6-F681-8018-819E-9CAA8E712BB0

LEGEND

- FINISHED SURFACE CONTOURS (0.25m INTERVALS) — 57.50
- LOT BOUNDARY
- TOP OF BATTER
- TOE OF BATTER
- RETAINING WALL
- OPEN CHANNEL
- BARRIER TYPE 'B1' KERB AND CHANNEL
- MOUNTABLE TYPE 'M1' KERB AND CHANNEL
- EASEMENT
- CUT FILL LABEL — 29.945 / +0.828
- PAD RL LABEL — PAD RL 30.300
- PROPOSED AREAS OF FILL
- PROPOSED AREAS OF CUT
- RETAINING WALL 0.0m-1.5m
- RETAINING WALL 1.5m-2.0m
- RETAINING WALL 2.0m-2.5m
- SANDSTONE BOULDER RETAINING WALL

NOTE:
ALL PRECINCT 1 EARTHWORKS SHOWN. STAGE 1 AND 2 WORKS PROPOSED WITH TEMPORARY EARTHWORKS TO TIE INTO EXISTING AS DETERMINED AT THE DETAIL DESIGN PHASE OF THE PROJECT

JOINS DRAWING NUMBER B00702-DA-CE02



INSET A-A

JOINS INSET A-A LEFT

0 10 20 30 40 50m
10 7.5 5 2.5
SCALE 1:500 (A1) 1:1000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

JOINS DRAWING NUMBER B00702-DA-CE05

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
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B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
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URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: EARTHWORKS DETAILED LAYOUT PLAN SHEET 3 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702
Drawing No. DA-CE04
Rev C

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JOINS DRAWING NUMBER B00702-DA-CE03

JOINS DRAWING NUMBER B00702-DA-CE04

STAGE 1

ROAD 04

ROAD 05

ROAD 06

ROAD 07

ROAD 08

ROAD 03

ROAD 01

HANNAH CLOSE

LUKE STREET

EPRAPAH CREEK

NOTIONAL EASEMENT FOR INFRASTRUCTURE PURPOSES

JOINS INSET A-A B00702-DA-CE04

SCALE 1:500 (A1) 1:1000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

NOTE:
ALL PRECINCT 1 EARTHWORKS SHOWN. STAGE 1 AND 2 WORKS PROPOSED WITH TEMPORARY EARTHWORKS TO TIE INTO EXISTING AS DETERMINED AT THE DETAIL DESIGN PHASE OF THE PROJECT

LEGEND

- PROPOSED AREAS OF FILL
- PROPOSED AREAS OF CUT
- RETAINING WALL 0.0m-1.5m
- RETAINING WALL 1.5m-2.0m
- RETAINING WALL 2.0m-2.5m
- SANDSTONE BOULDER RETAINING WALL
- FINISHED SURFACE CONTOURS (0.25m INTERVALS)
- LOT BOUNDARY
- TOP OF BATTER
- TOE OF BATTER
- RETAINING WALL
- OPEN CHANNEL
- BARRIER TYPE 'B1' KERB AND CHANNEL
- MOUNTABLE TYPE 'M1' KERB AND CHANNEL
- EASEMENT
- CUT FILL LABEL
- PAD RL LABEL

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
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URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: EARTHWORKS DETAILED LAYOUT PLAN SHEET 4 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702-DA-CE05
Drawing No.
Rev C

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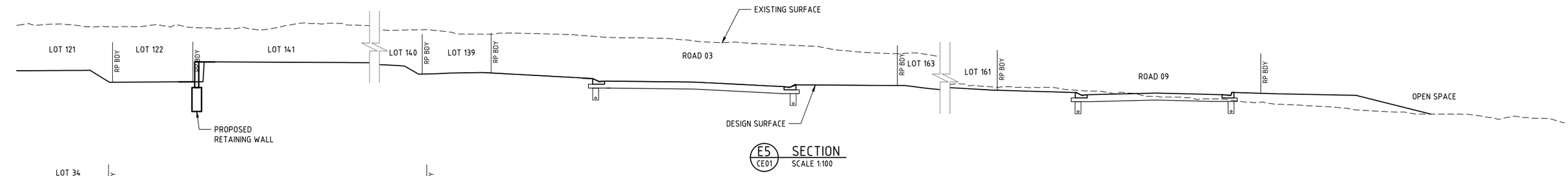
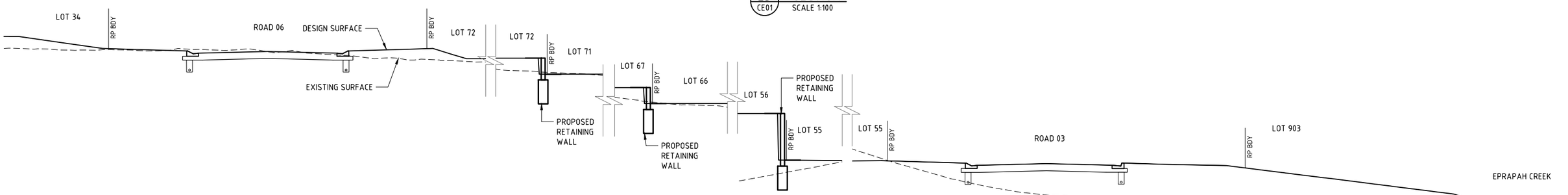


E5 CE01 SECTION
SCALE 1:100



E4 CE01 SECTION
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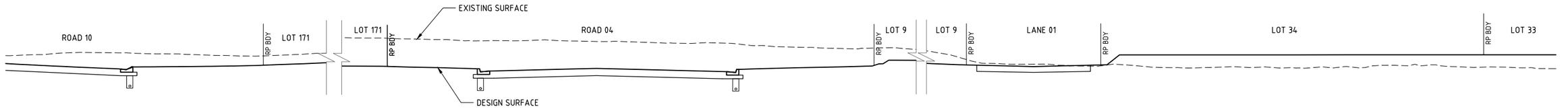

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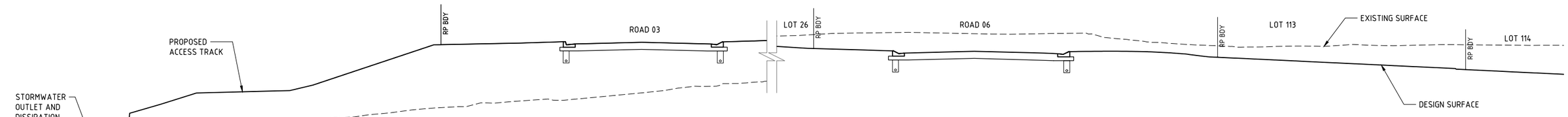
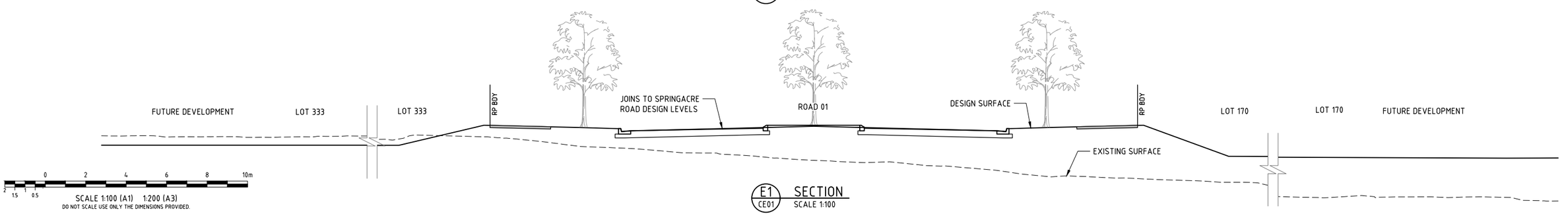


E2 CE01 SECTION
SCALE 1:100



E1 CE01 SECTION
SCALE 1:100

0 2 4 6 8 10m
2 1.5 1 0.5
SCALE 1:100 (A1) 1:200 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: EARTHWORKS CROSS SECTIONS
SHEET 1 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CE06 | Rev C

Plot Date: 19/06/2026 12:17:32 PM
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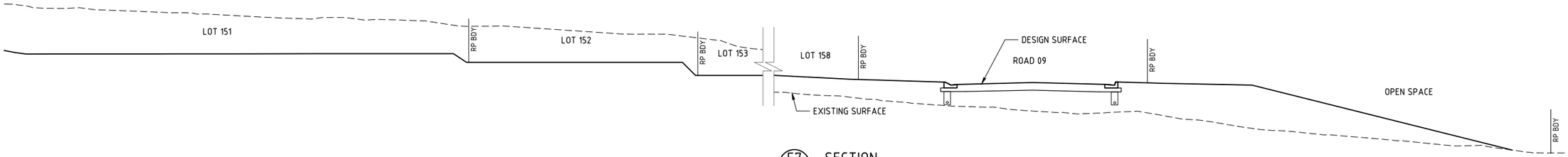
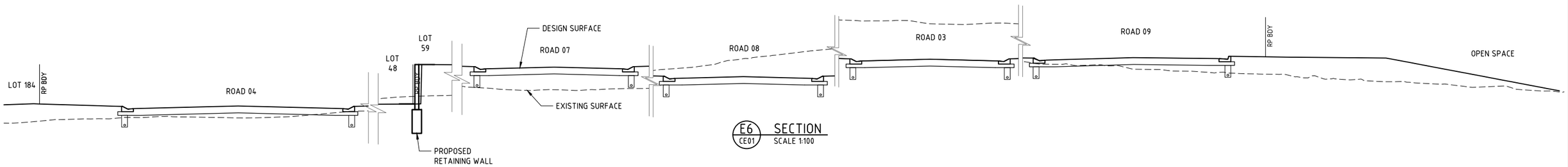


E7 CE01 SECTION
SCALE 1:100



E6 CE01 SECTION
SCALE 1:100

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2 1.5 1 0.5
SCALE 1:100 (A1) 1:200 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
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URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: EARTHWORKS CROSS SECTIONS SHEET 2 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CE07 | Rev C

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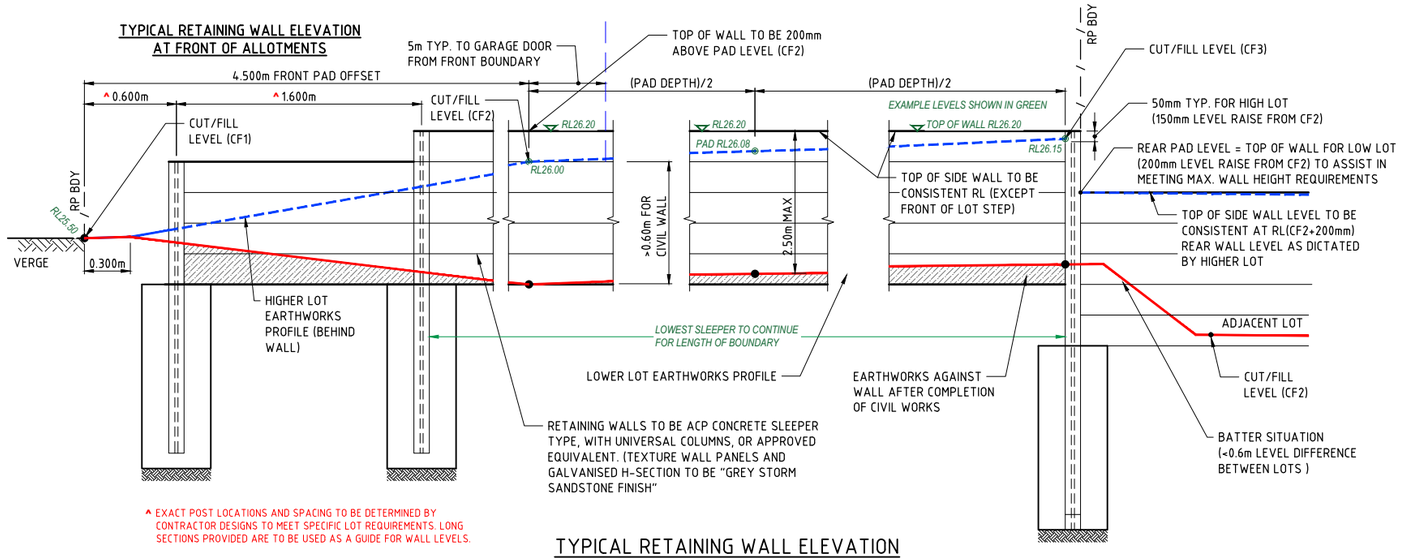
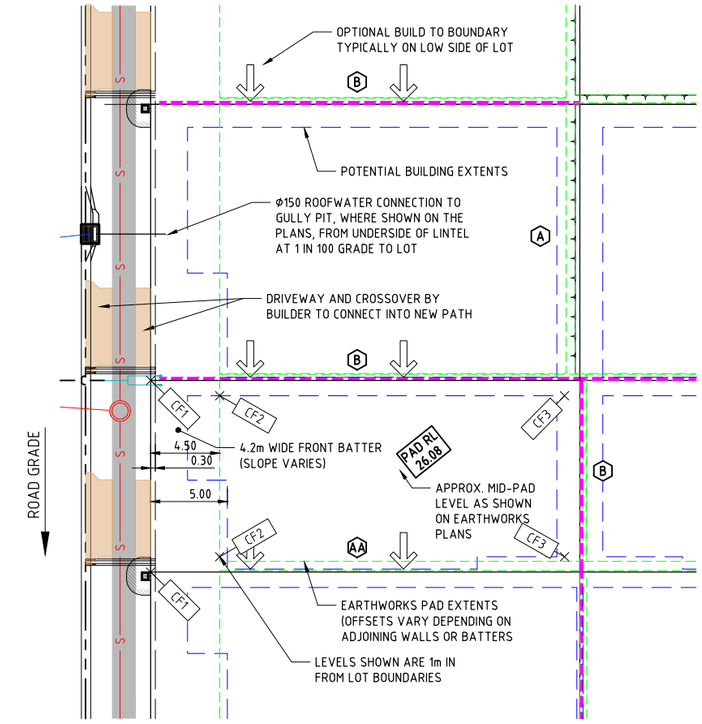


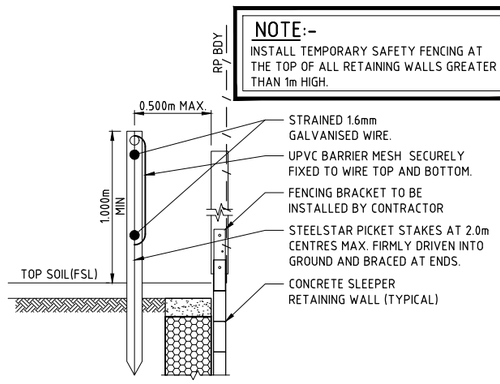
^ EXACT POST LOCATIONS AND SPACING TO BE DETERMINED BY CONTRACTOR DESIGNS TO MEET SPECIFIC LOT REQUIREMENTS. LONG SECTIONS PROVIDED ARE TO BE USED AS A GUIDE FOR WALL LEVELS.

TYPICAL RETAINING WALL ELEVATION INTER-ALLOTMENT SIDE WALLS

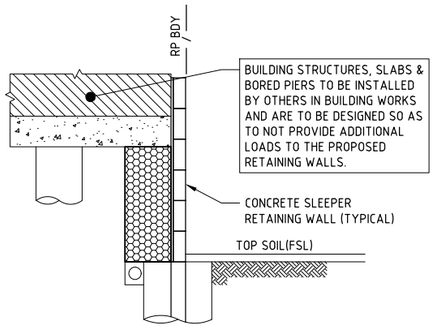


TYPICAL EARTHWORKS PAD SETOUT

NOTE:-
INSTALL TEMPORARY SAFETY FENCING AT THE TOP OF ALL RETAINING WALLS GREATER THAN 1m HIGH.

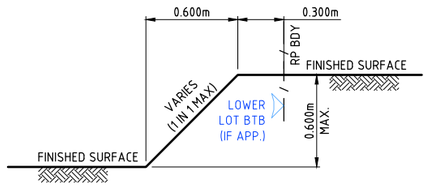


TEMPORARY SAFETY BARRIER TO RETAINING WALLS TYPICAL SECTION

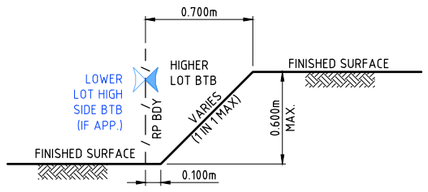


BUILD TO BOUNDARY TYPICAL SECTION

RETAINING WALL DESIGN IS INDICATIVE ONLY. DESIGN AND CONSTRUCTION OF ALL RETAINING WALLS TO BE UNDERTAKEN BY CONTRACTOR.

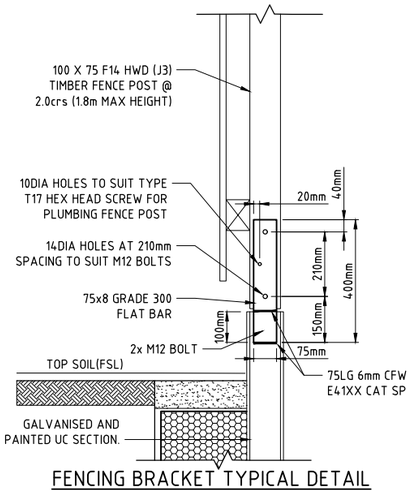


A < 0.6m BATTER TYPICAL SECTION (NON-ZERO BOUNDARY OR REAR BOUNDARY)



AA < 0.6m BATTER TYPICAL SECTION (ZERO-BOUNDARY)

NOTE:-
REFER NEXT SHEET FOR RETAINING WALL NOTES AND ADDITIONAL SECTIONS



FENCING BRACKET TYPICAL DETAIL

DESIGN AND CONSTRUCT BY OTHERS

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: RETAINING WALL TYPICAL DETAILS 1 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-RW01 | Rev C

Plot Date: 19/06/2026 12:17:33 PM
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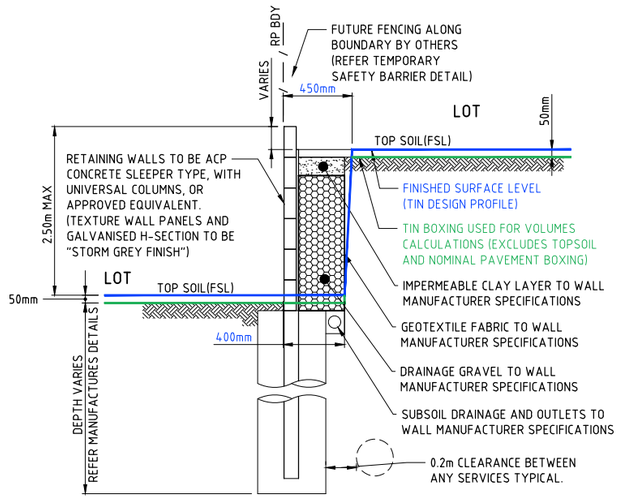
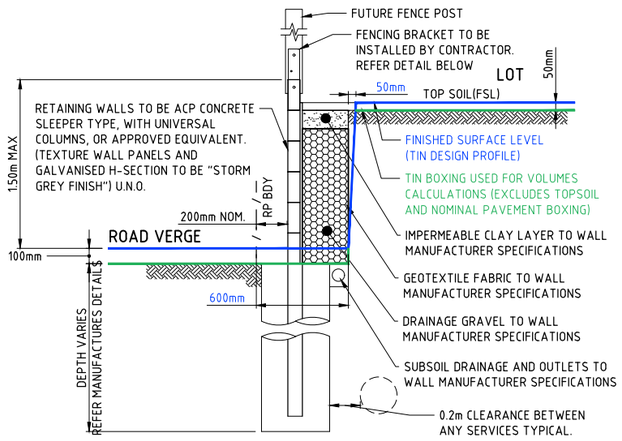
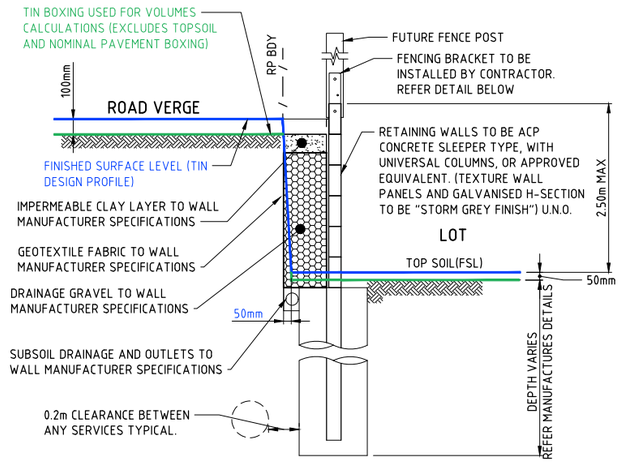


B 2.5m MAX. HEIGHT RETAINING WALL TYPICAL SECTION



C 1.5m MAX. RETAINING WALL ADJACENT TO ROAD RESERVE TYPICAL SECTION

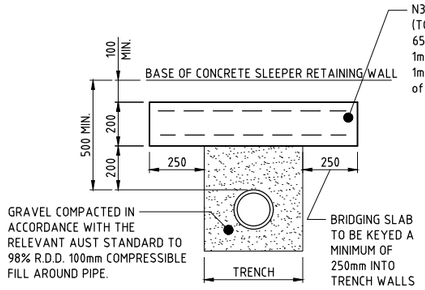


D 2.5m MAX. RETAINING WALL TYPICAL SECTION ADJACENT TO ROAD RESERVE

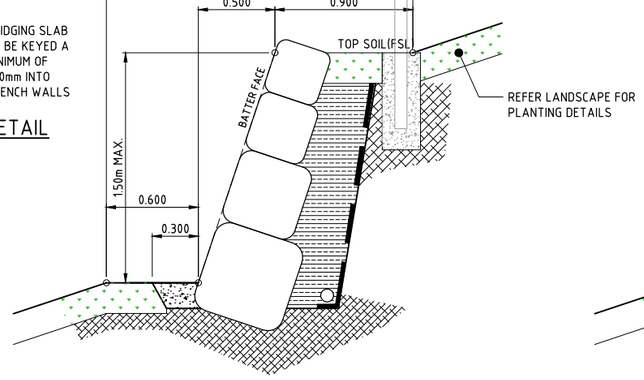
RETAINING WALL DESIGN IS INDICATIVE ONLY. DESIGN AND CONSTRUCTION OF ALL RETAINING WALLS TO BE UNDERTAKEN BY CONTRACTOR.

RETAINING WALL DESIGN PARAMETERS

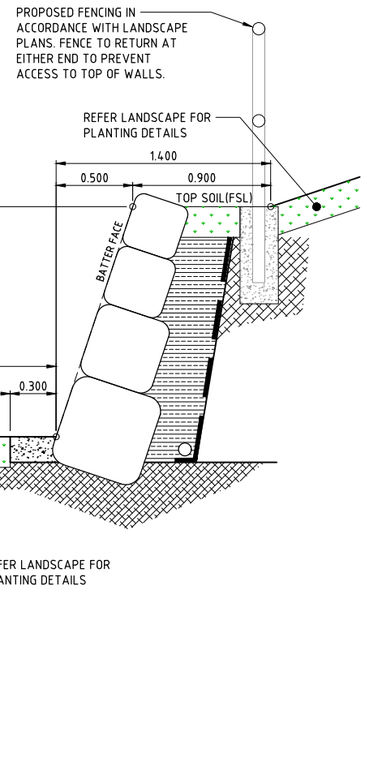
1. COMPLY WITH AS4678-2002 "EARTH RETAINING STRUCTURES".
2. MINIMUM DESIGN LIFE OF 60 YEARS.
3. MINIMUM SUPERIMPOSED DESIGN LIVE LOAD OF 5kPa FOR CUT WALLS.
4. ALL WALLS RETAINING ROAD RESERVE TO HAVE MIN. 20KPa LIVE LOAD.
5. DESIGN TO CARRY WIND LOADS IMPOSED BY A 2m (MAX) HIGH FENCE.
6. COMPLY WITH REDLAND CITY COUNCIL PLANNING SCHEME AND ALL RELEVANT COUNCIL STANDARDS.
7. PROVIDE RPEQ CERTIFICATION FOR DESIGN & CONSTRUCTION AND PROVIDE APPROPRIATE CERTIFIED FORMS.
8. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SHOWN OTHERWISE.
9. FENCE BRACKETS TO BE PROVIDED AT THE INTERSECTION OF LOT BOUNDARIES, SO AS TO PROVIDE A SUITABLE POINT OF CONNECTION FOR THE FUTURE INSTALLATION OF FENCING. INTERMEDIATE SPACING OF BRACKETS ARE TO ALLOW FOR TYPICAL FENCE RAIL LENGTHS WHERE POSSIBLE.
10. RETAINING WALL DESIGNER MUST UNDERTAKE A GLOBAL STABILITY ASSESSMENT FOR ALL RETAINING WALLS COGNISANT OF ALL PRE-EXISTING AND ULTIMATE EARTHWORKS GEOMETRY, SERVICES WITHIN THE ZONE OF INFLUENCE, AND ANY RAPID DRAW-DOWN OF WATER LEVELS WHICH MAY IMPACT THE STABILITY OF THE WALL.
11. SUBSOIL DRAINS ARE TO BE CONNECTED TO KERB ADAPTORS WHERE POSSIBLE.



TYPE-1 BRIDGING SLAB DETAIL
NOT TO SCALE



E 1.5m MAX. SANDSTONE RETAINING WALL IN PARK / DRAINAGE RESERVE - TYPICAL SECTION



F 2-TIER 3m MAX. SANDSTONE RETAINING WALL IN PARK / DRAINAGE RESERVE - TYPICAL SECTION

0 0.02 0.04 0.06 0.08 0.1m
0.02 0.015 0.01 0.005
SCALE 1:1 (A1) 1:2 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: RETAINING WALL - TYPICAL DETAILS SHEET 2 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-RW02 | Rev C

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User: ETHAN SCHAFER

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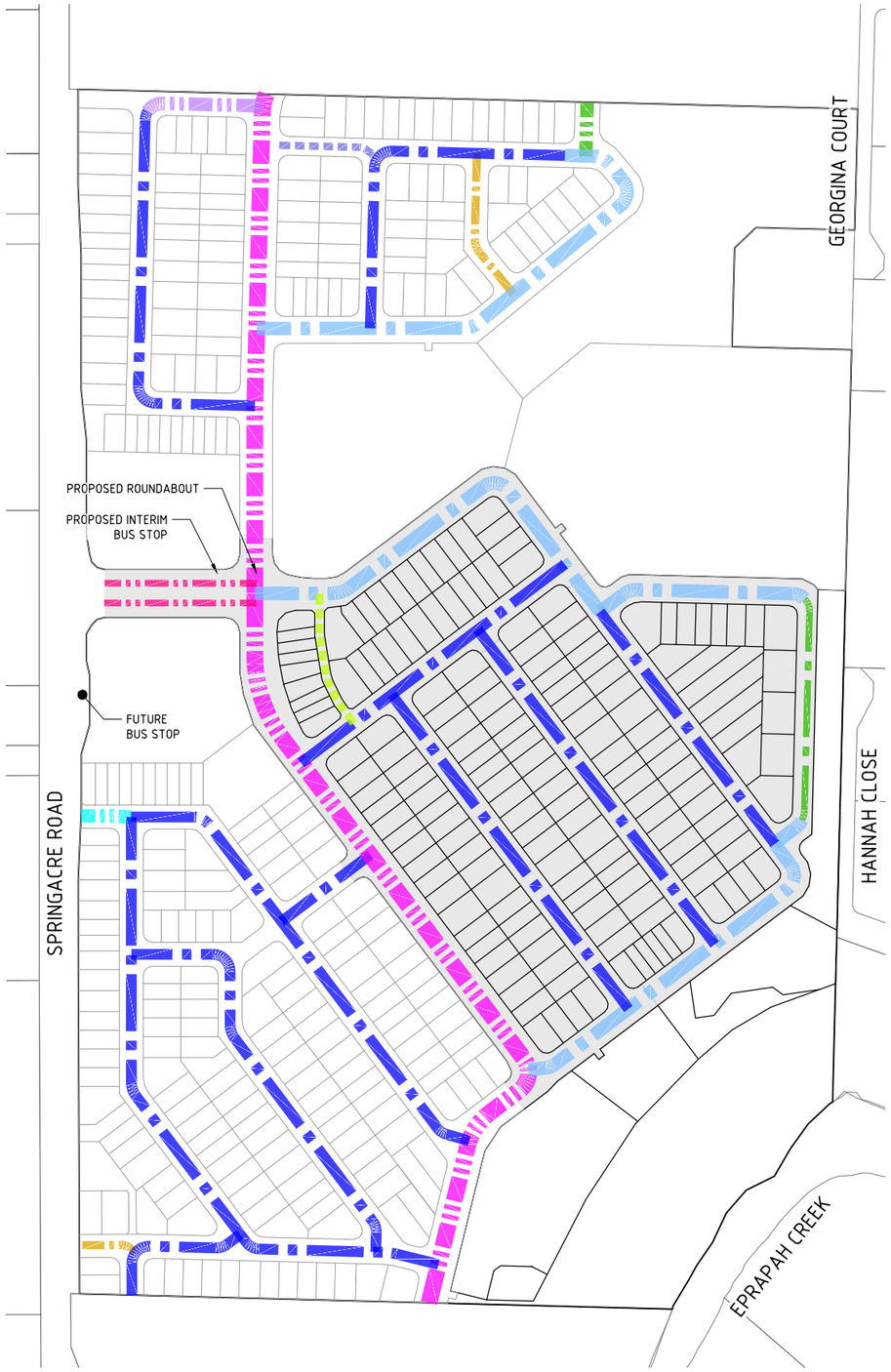


LEGEND - ROAD NETWORK

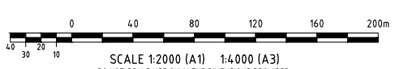
- PROPOSED STAGE BOUNDARY
- PROPOSED LOT BOUNDARY
- CENTRE CONNECTOR
  32.0m WIDE ROAD RESERVE
  2x7m WIDE ROAD PAVEMENTS
  5.0m MEDIAN
  2x6.5m WIDE VERGES
- PARKING COLLECTOR (NEIGHBOURHOOD CONNECTOR)
  22.0m WIDE ROAD RESERVE
  11.2m WIDE ROAD PAVEMENT
  2x2.3m WIDE PARKINGS
  4.5m AND 6.3m WIDE VERGES
- ACCESS STREET - 7.5m
  16.0m WIDE ROAD RESERVE
  7.5m WIDE ROAD PAVEMENT
  4.25m WIDE VERGES
- ACCESS STREET - 7.5m WITH 3m PATH
  18.0m WIDE ROAD RESERVE
  7.5m WIDE ROAD PAVEMENT
  4.25m AND 6.25m WIDE VERGES
- ACCESS STREET - 7.5m WITH 3m PATH
  16.0m WIDE ROAD RESERVE
  7.5m WIDE ROAD PAVEMENT
  4.25m WIDE VERGES
- ACCESS STREET - 6m
  15.5m WIDE ROAD RESERVE
  8.3m WIDE ROAD PAVEMENT
  4.25m AND 2.95m WIDE VERGES
- ACCESS STREET - 6m WITH 2 PATHS
  15.5m WIDE ROAD RESERVE
  8.3m WIDE ROAD PAVEMENT
  4.75m AND 2.95m WIDE VERGES
- ACCESS STREET - 13.25m
  13.25m WIDE ROAD RESERVE
  7.5m WIDE ROAD PAVEMENT
  4.25m AND 1.50m WIDE VERGE
- ACCESS LANEWAY
  DRIVEWAYS
  6.5m WIDE ROAD RESERVE
  5.5m WIDE ROAD PAVEMENT
  0.5m WIDE VERGES
- ACCESS LANEWAY
  DRIVEWAYS
  12.5m WIDE ROAD RESERVE
  5.0m WIDE ROAD PAVEMENT
  4.00m AND 3.50m WIDE VERGES
- ACCESS STREET - 7.5m WITH 3m PATH
  16.7m WIDE ROAD RESERVE
  7.5m WIDE ROAD PAVEMENT
  4.25m AND 4.95m WIDE VERGES

LEGEND - PATH NETWORK

- CONCRETE PATHWAY - 1.5m WIDE
- CONCRETE PATHWAY - 3m WIDE
- CONCRETE PATHWAY - 4m WIDE

ROAD NETWORK LAYOUT

SCALE 1:2000 (A1) 1:4000(A3)



SCALE 1:2000 (A1) 1:4000 (A3)
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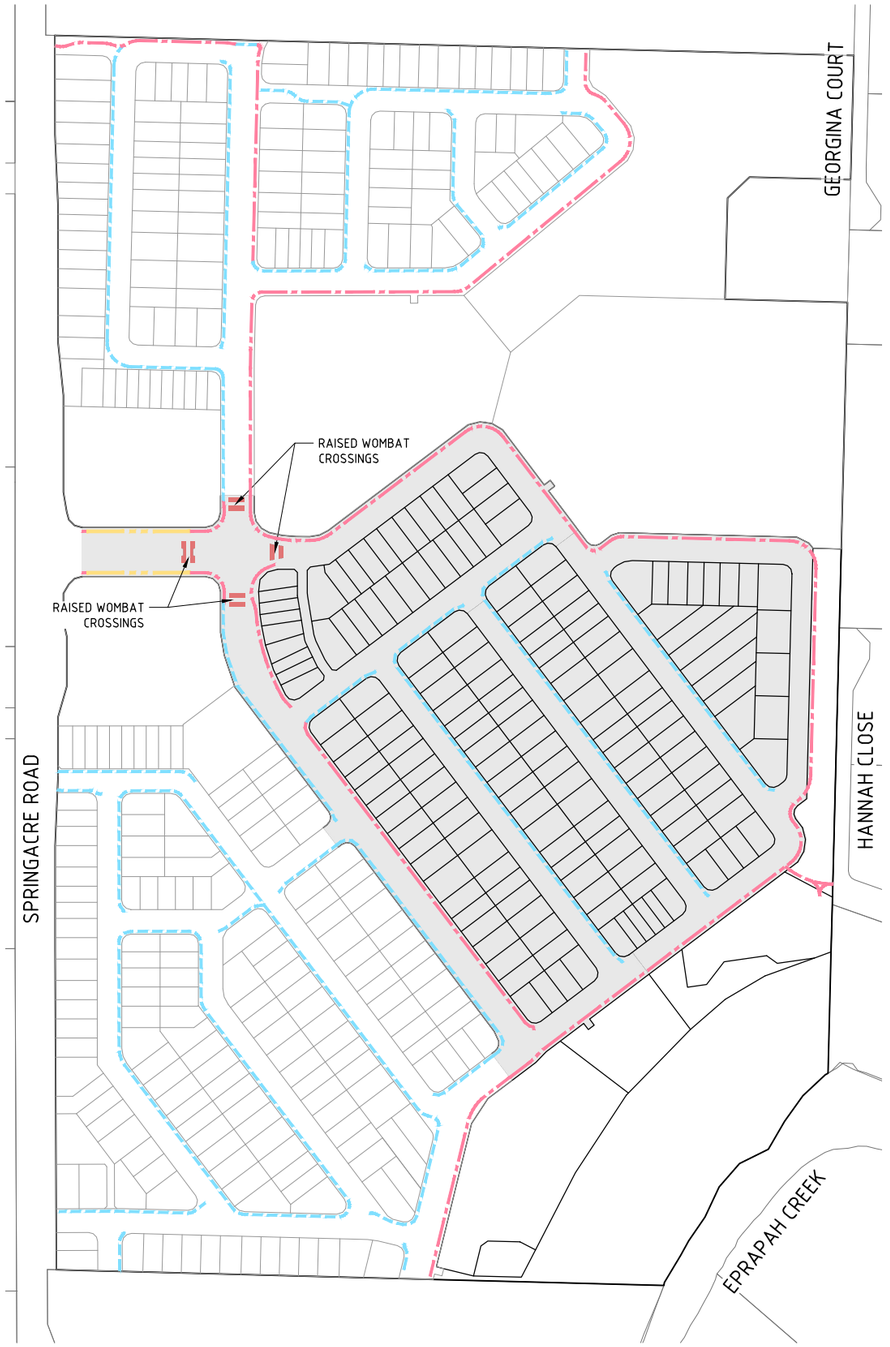

PATH NETWORK LAYOUT

SCALE 1:2000 (A1) 1:4000(A3)

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Engelman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: ROAD NETWORK LAYOUT

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702
Drawing No. DA-CR01
Rev C

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Plot Date: 19/06/2026 12:18:40 PM User: ETHAN SCHAEFER
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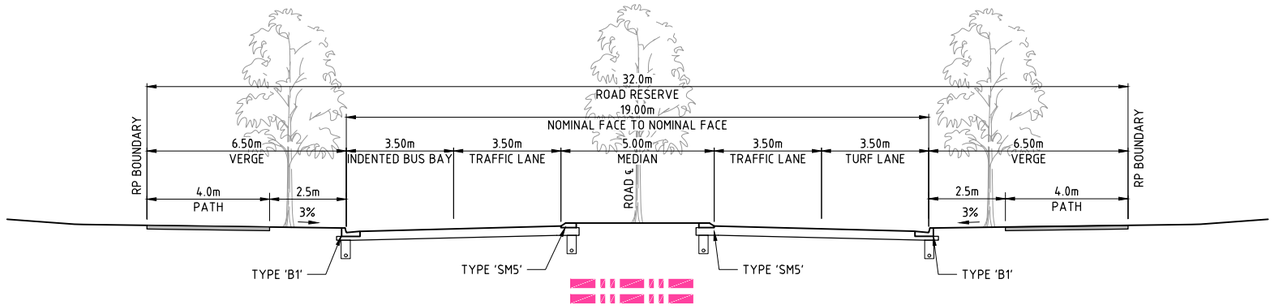

1 CR01 CENTRE CONNECTOR
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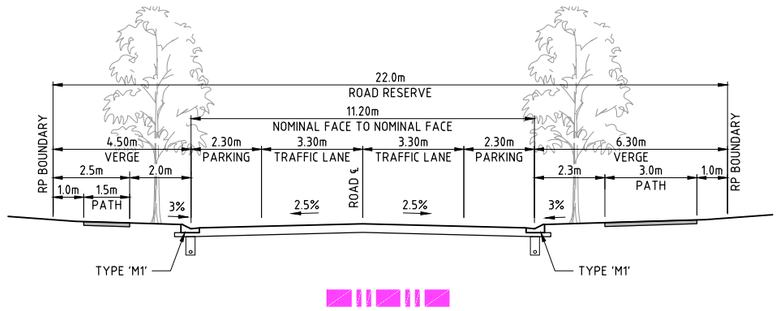

2 CR01 PARKING COLLECTOR (NEIGHBOURHOOD CONNECTOR)
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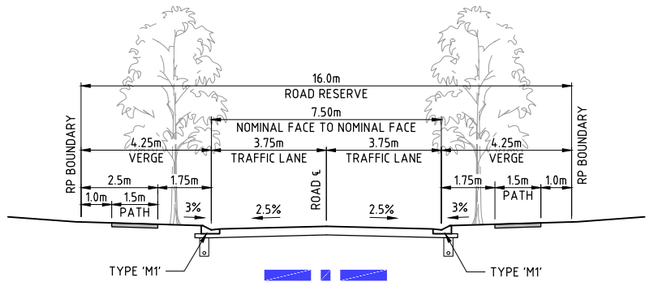
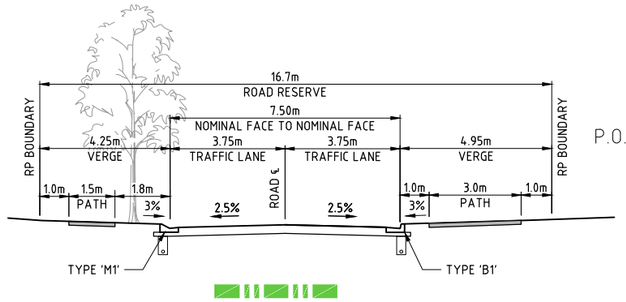
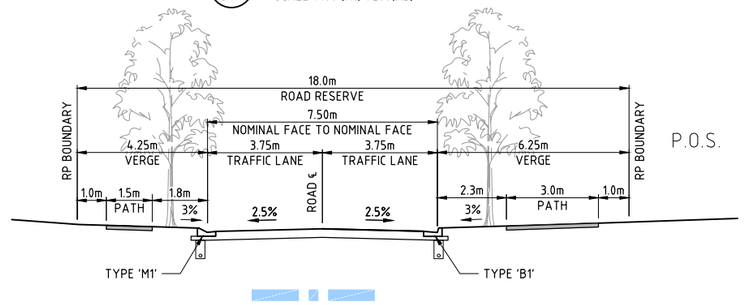


3 CR01 ACCESS STREET - 7.5m
SCALE 1:100 (A1) 1:200(A3)



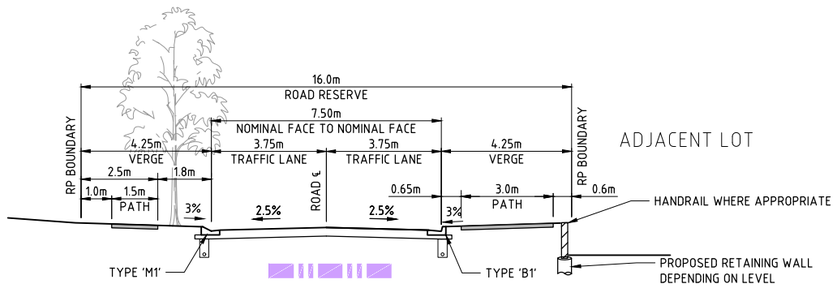
P.O.S.

11 CR01 ACCESS STREET - 7.5m WITH 3m PATH
SCALE 1:100 (A1) 1:200(A3)



P.O.S.

4 CR01 ACCESS STREET - 7.5m WITH 3m PATH
SCALE 1:100 (A1) 1:200(A3)

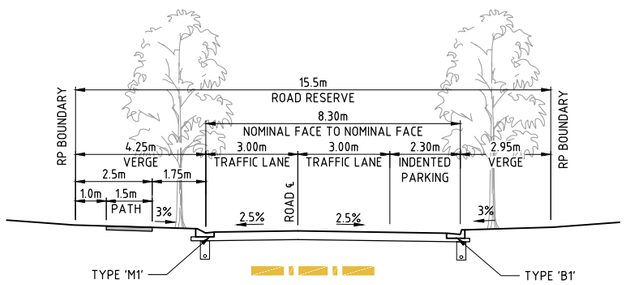


ADJACENT LOT

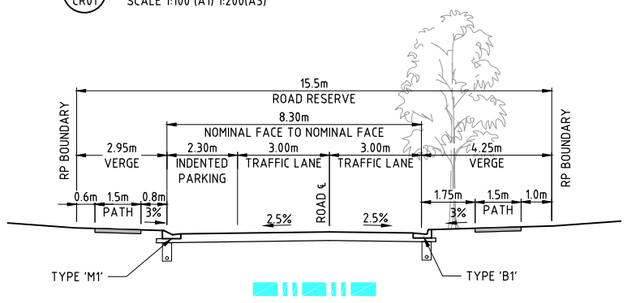
HANDRAIL WHERE APPROPRIATE

PROPOSED RETAINING WALL DEPENDING ON LEVEL

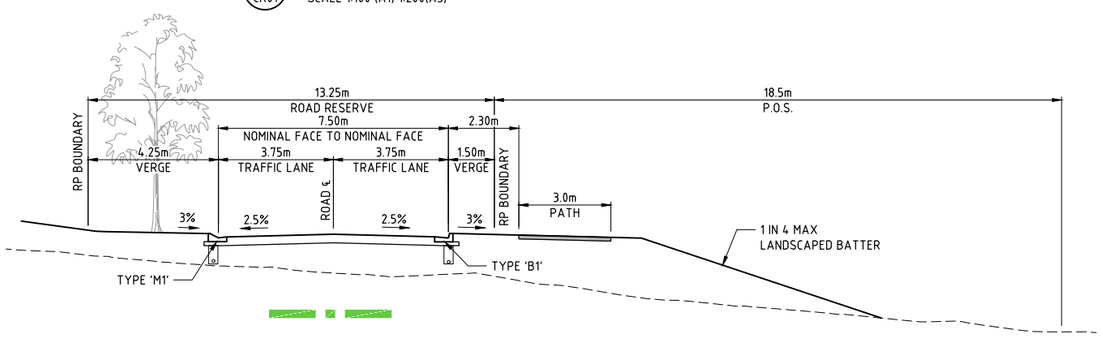
5 CR01 ACCESS STREET - 7.5m WITH 3m PATH
SCALE 1:100 (A1) 1:200(A3)



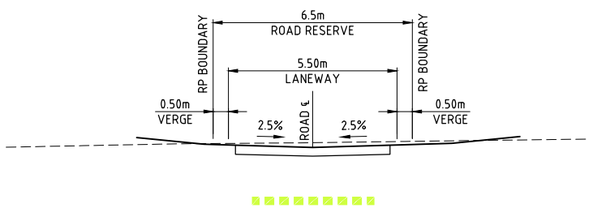
6 CR01 ACCESS STREET - 6m
SCALE 1:100 (A1) 1:200(A3)



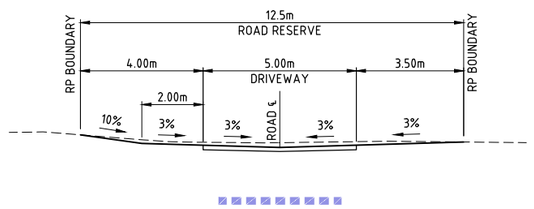
7 CR01 ACCESS STREET - 6m WITH 2 PATHS
SCALE 1:100 (A1) 1:200(A3)



8 CR01 ACCESS STREET - 13.25m
SCALE 1:100 (A1) 1:200(A3)



9 CR01 ACCESS LANEWAY
SCALE 1:100 (A1) 1:200(A3)



10 CR01 CONCRETE DRIVEWAY
SCALE 1:100 (A1) 1:200(A3)

0 2 4 6 8 10m
2 1.5 1 0.5
SCALE 1:100 (A1) 1:200 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingleman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX

EMPOWER

Client URBEX PTY LTD
Project SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title ROAD NETWORK SECTIONS

Datum AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702
Drawing No. DA-CR02
Rev C

Plot Date: 19/06/2026 12:18:42 PM
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User: ETHAN SCHAFER

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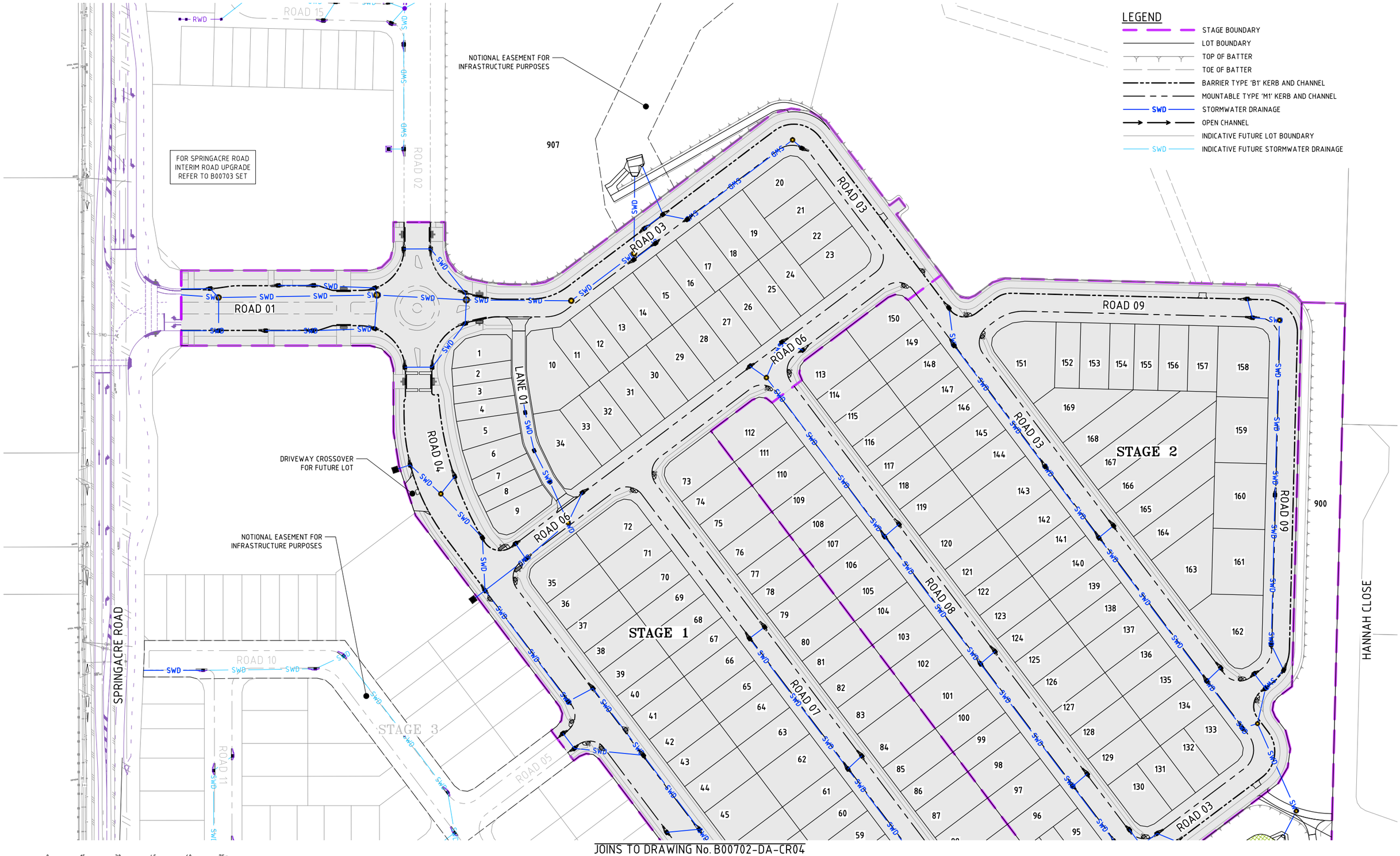

JOINS TO DRAWING No. B00702-DA-CR04

0 15 30 45 60 75m
15 11.25 7.5 3.75
SCALE 1:750 (A1) 1:1500 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingleman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client URBEX PTY LTD
Project SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title ROADWORKS AND DRAINAGE PLAN SHEET 1 OF 2

Datum AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702
Drawing No. DA-CR03
Rev C

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User: ETHAN SCHAFER

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JOINS TO DRAWING No. B00702-DA-CR03

0 15 30 45 60 75m

15 11.25 7.5 3.75

SCALE 1:750 (A1) 1:1500 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Ingerman
Registered Engineer
Date 19/6/2026

9424
Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: ROADWORKS AND DRAINAGE PLAN
SHEET 2 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702

Drawing No. DA-CR04

Rev C

Plot Date: 19/06/2026 12:19:01 PM
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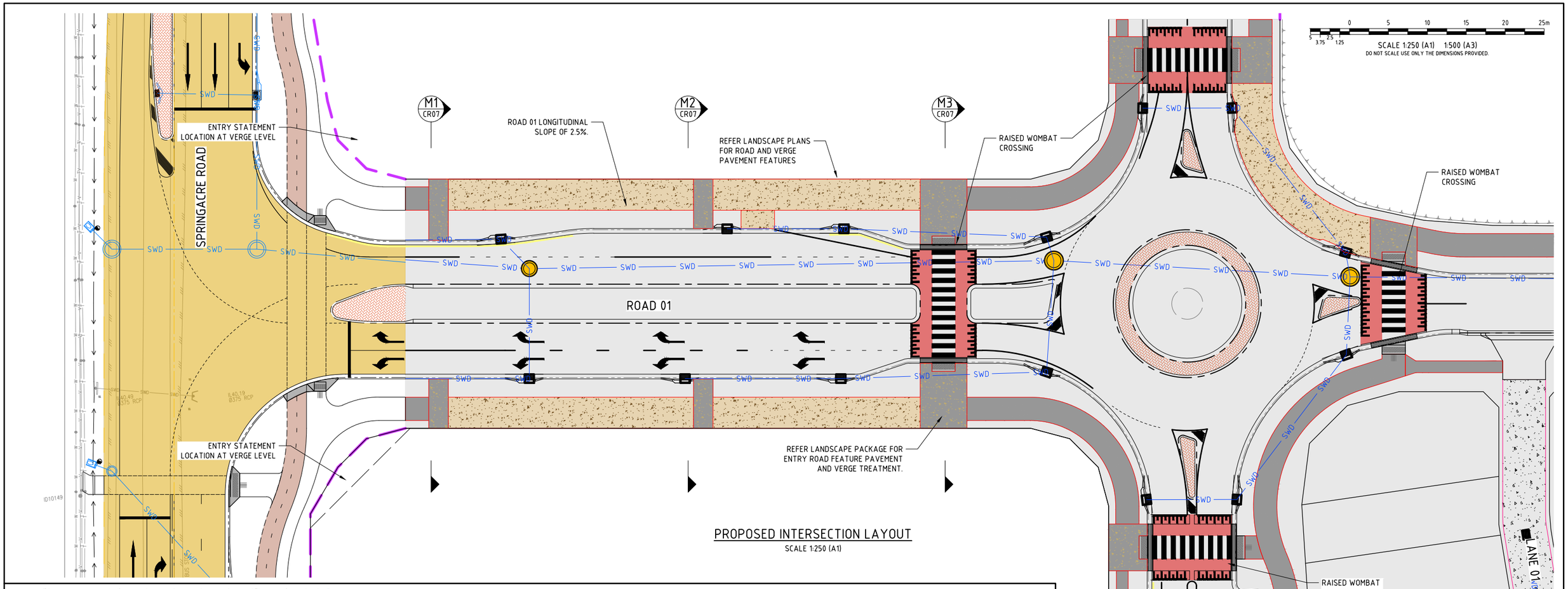
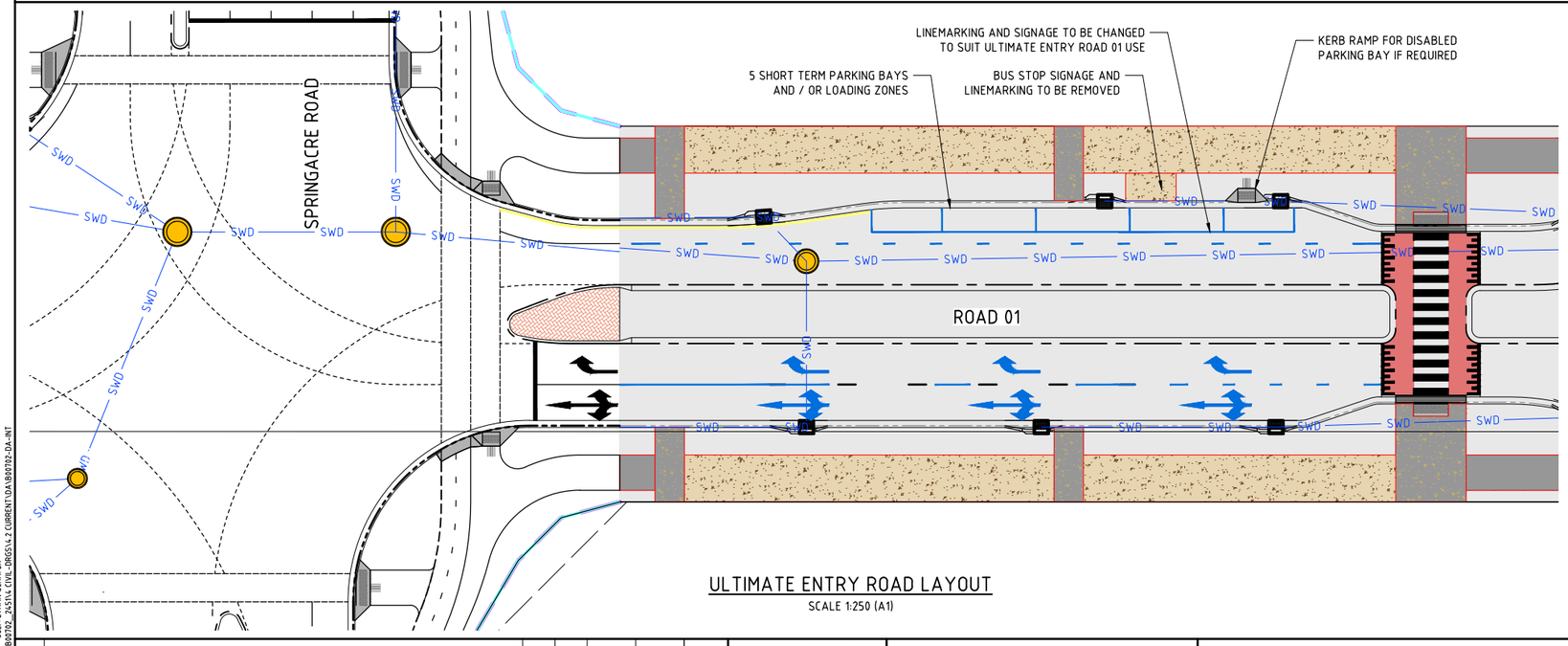


PROPOSED INTERSECTION LAYOUT

SCALE 1:250 (A1)



ULTIMATE ENTRY ROAD LAYOUT

SCALE 1:250 (A1)

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Angerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: ENTRY ROAD INTERSECTION DETAILS

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CR06 | Rev C

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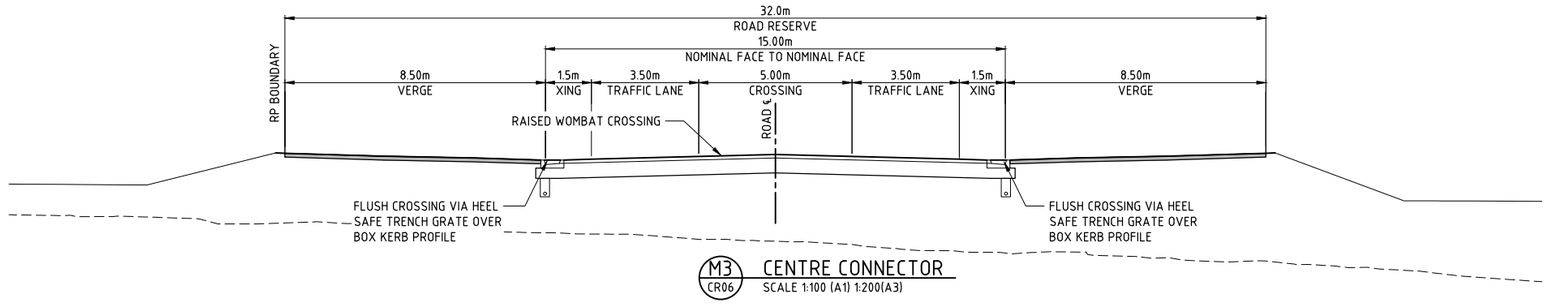
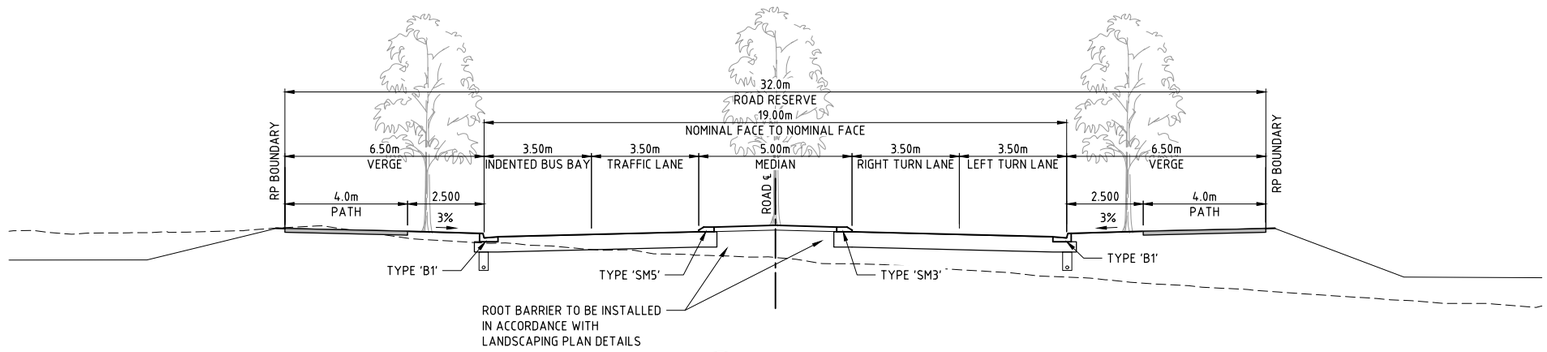
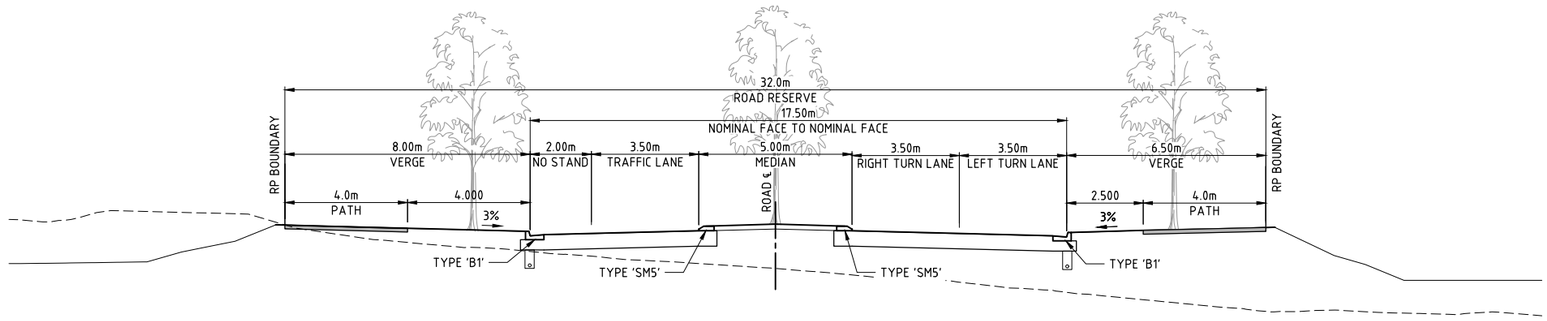


M3 CR06 **CENTRE CONNECTOR**
SCALE 1:100 (A1) 1:200(A3)



M2 CR06 **CENTRE CONNECTOR**
SCALE 1:100 (A1) 1:200(A3)



M1 CR06 **CENTRE CONNECTOR**
SCALE 1:100 (A1) 1:200(A3)

H. SCALE 1:200 (A1) 1:400 (A3)
4 3 2 1 0 4 8 12 16 20m
2 1.5 1 0.5 0 2 4 6 8 10m
V. SCALE 1:100 (A1) 1:200 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingelman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: ENTRY ROAD SECTIONS

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

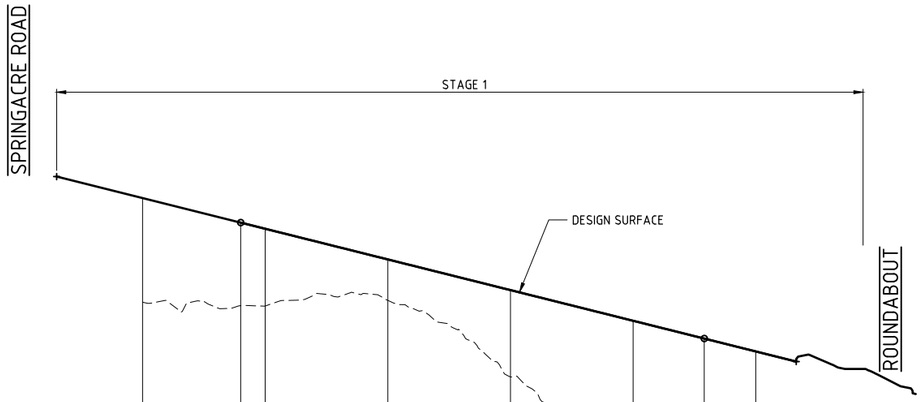
NOT FOR CONSTRUCTION

Project No. B00702-DA-CR07
Drawing No.
Rev C

Plot Date: 19/06/2026 12:19:22 PM User: ETHAN SCHAEFER

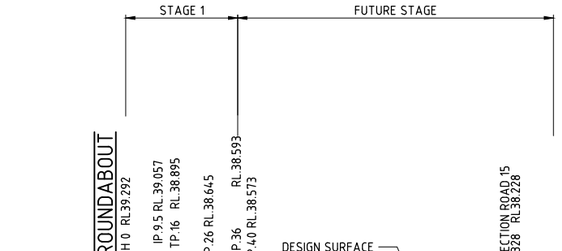
Docusign Envelope ID: 2FE5ADC6-F681-8018-819E-9CAA8E712BB0

FOR SPRINGACRE ROAD
INTERIM ROAD UPGRADE
REFER TO B00703 SET



% GRADE		-2.5 %			-2.5 %			-2.5 %	
GRADE DISTANCE		30 D			75.6 D			15 D	
PARABOLA LENGTH									
PARABOLA RADIUS									
DATUM R.L.32.000									
LIP OF KERB RHS						40.059			
LIP OF KERB LHS		41.647	41.547			40.059	39.77		
EXISTING SURFACE	40.539	40.482	40.477	40.568	39.322	37.786	36.995	36.936	37.428
CUT/FILL DEPTH	1.697	1.354	1.259	0.668	1.414	2.45	2.951	2.8	
FINISHED CENTRELINE RL	42.236	41.836	41.736	41.236	40.736	40.236	39.946	39.736	
PEGGED CHAINAGE	0	16	20	40	60	80	91.6	100	116.1
HORIZ. CURVE RADIUS									

ROAD 01 LONGITUDINAL SECTION
SCALE 1:100(VERT.) SCALE 1:1000(HORIZ.)



% GRADE		-2.5 %		-0.514 %				-0.403 %			
GRADE DISTANCE		16.5 D		14 D				132 D			
PARABOLA LENGTH				20 L							
PARABOLA RADIUS				1006.92 R							
DATUM R.L.26.000											
LIP OF KERB RHS				38.565	38.464	38.444	38.363	38.282	38.202	38.122	38.04
LIP OF KERB LHS				38.565	38.464	38.444	38.363	38.282	38.202	38.121	38.12	38.067	38.036
EXISTING SURFACE	37.428	35.34	35.416	35.549	35.683	35.729	35.882	35.507	35.659	35.095	34.966	34.95	34.989
CUT/FILL DEPTH		3.555	3.387	3.145	2.911	2.843	2.61	2.905	2.671	3.156	3.284	3.25	3.18
FINISHED CENTRELINE RL		38.895	38.802	38.694	38.593	38.573	38.492	38.411	38.331	38.251	38.25	38.2	38.169
PEGGED CHAINAGE	0	16	20	26	36	40	60	80	100	119.693	120	132.421	140
HORIZ. CURVE RADIUS											500 R		

ROAD 02 LONGITUDINAL SECTION
SCALE 1:100(VERT.) SCALE 1:1000(HORIZ.)

SCALE 1:1000 (A1) 1:2000 (A3)
20 15 10 5 0 20 40 60 80 100m
2.0 1.5 1.0 0.5 0 2 4 6 8 10m
SCALE 1:100 (A1) 1:200 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingleman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX
EMPOWER

Client URBEX PTY LTD
Project SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title ROAD LONGITUDINAL SECTION
SHEET 1 OF 6

Datum
AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No.	Drawing No.	Rev
B00702	DA-CR08	C

Plot Date: 19/06/2026 12:19:26 PM
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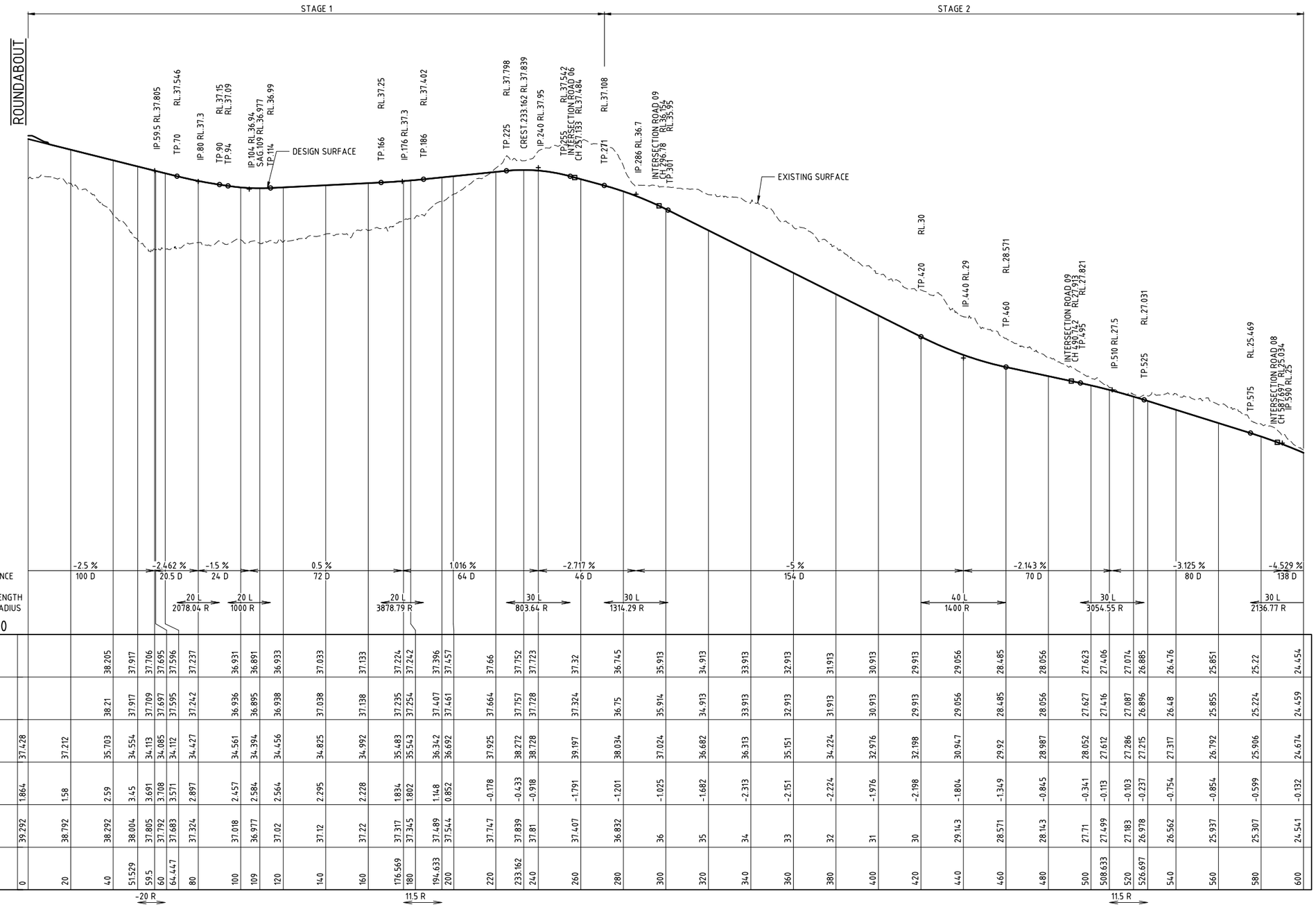

DATUM R.L.16.000

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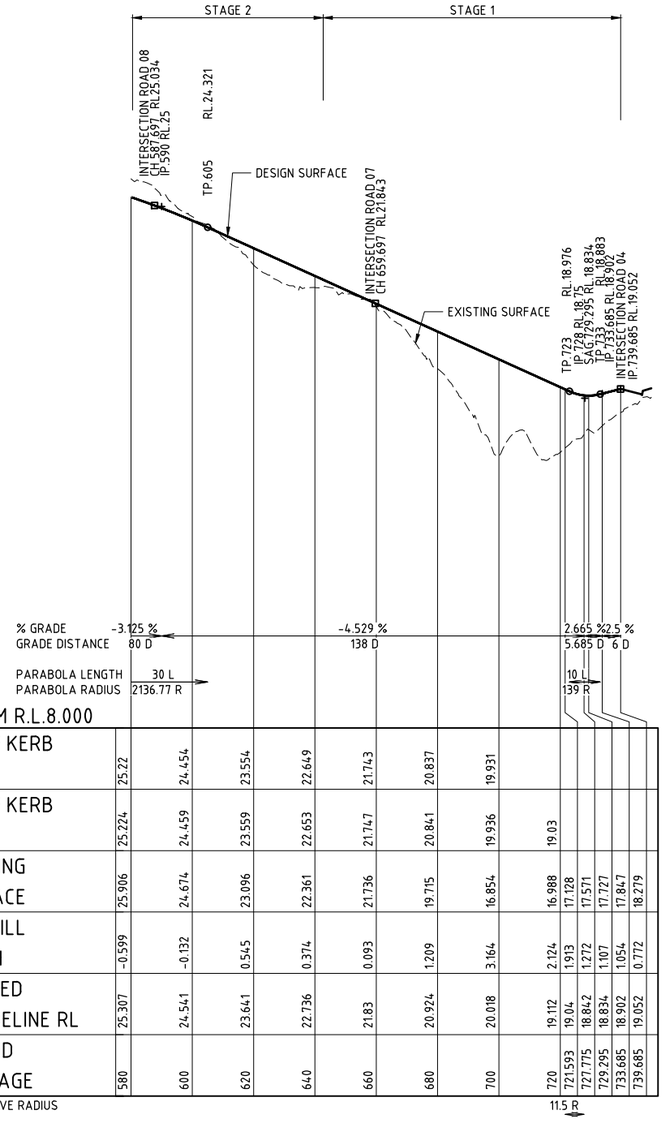
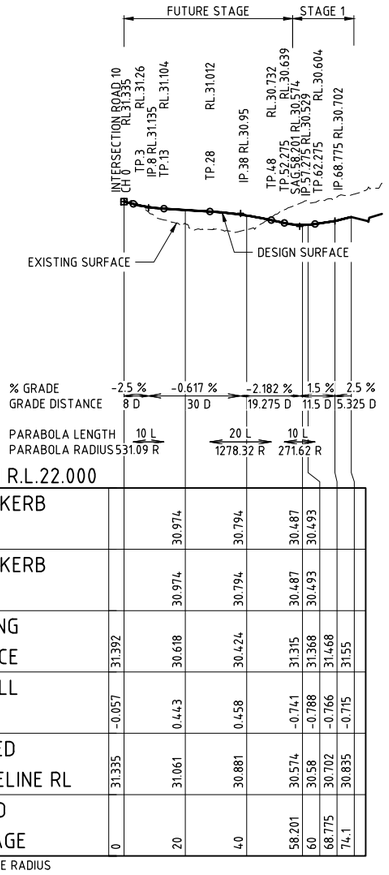


% GRADE		-3.125 %			-4.529 %				2.665 %	2.5 %			
GRADE DISTANCE		80 D			138 D				5.685 D	6 D			
PARABOLA LENGTH		30 L							10 L				
PARABOLA RADIUS		2136.77 R							139 R				
DATUM R.L.8.000													
LIP OF KERB RHS	25.22		24.454	23.554	22.649	21.743	20.837	19.931					
LIP OF KERB LHS	25.224		24.459	23.559	22.653	21.747	20.841	19.936	19.03				
EXISTING SURFACE	25.906		24.674	23.096	22.361	21.736	19.715	16.854	16.988	17.128	17.571	17.727	17.847	18.279
CUT/FILL DEPTH	-0.599		-0.132	0.545	0.374	0.093	1.209	3.164	2.124	1.913	1.272	1.107	1.054	0.772
FINISHED CENTRELINE RL	25.307		24.541	23.641	22.736	21.83	20.924	20.018	19.112	19.04	18.842	18.834	18.902	19.052
PEGGED CHAINAGE	580		600	620	640	660	680	700	720	721.593	727.775	729.295	733.685	739.685
HORIZ. CURVE RADIUS									11.5 R					

ROAD 03 LONGITUDINAL SECTION

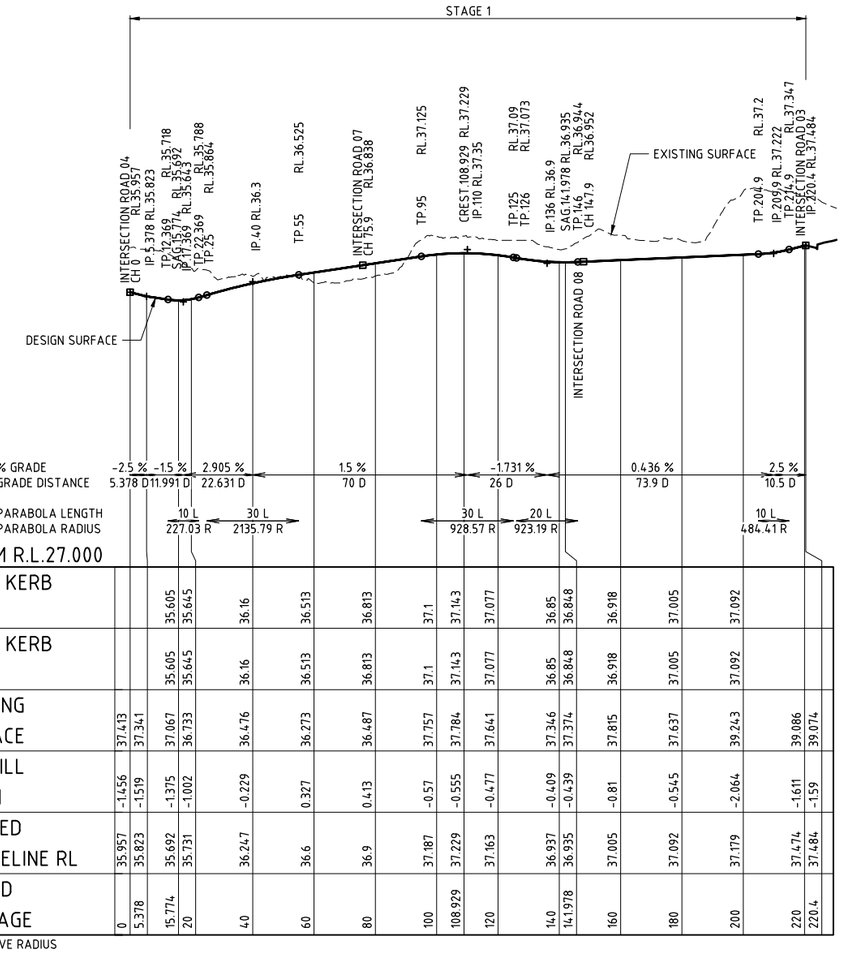
SCALE 1:100(VERT.) SCALE 1:1000(HORIZ.)



% GRADE	-2.5 %		-0.617 %		-2.182 %	1.5 %	2.5 %			
GRADE DISTANCE	8 D		30 D		19.275 D	11.5 D	5.325 D			
PARABOLA LENGTH	10 L			20 L		10 L				
PARABOLA RADIUS	531.09 R			1278.32 R		271.62 R				
DATUM R.L.22.000										
LIP OF KERB RHS		30.974	30.794		30.487	30.493				
LIP OF KERB LHS		30.974	30.794		30.487	30.493				
EXISTING SURFACE	31.392	30.618	30.424		31.315	31.368	31.468	31.55		
CUT/FILL DEPTH	-0.057	0.443	0.458		-0.741	-0.788	-0.766	-0.715		
FINISHED CENTRELINE RL	31.335	31.061	30.881		30.574	30.58	30.702	30.835		
PEGGED CHAINAGE	0	20	40		58.201	60	68.775	74.1		
HORIZ. CURVE RADIUS										

ROAD 05 LONGITUDINAL SECTION

SCALE 1:100(VERT.) SCALE 1:1000(HORIZ.)



% GRADE	-2.5 %	-1.5 %	2.905 %			1.5 %			-1.731 %			0.436 %			2.5 %								
GRADE DISTANCE	5.378 D	11.991 D	22.631 D			70 D			26 D			73.9 D			10.5 D								
PARABOLA LENGTH		10 L	30 L						30 L	20 L					10 L								
PARABOLA RADIUS		227.03 R	2135.79 R						928.57 R	923.19 R					484.41 R								
DATUM R.L.27.000																							
LIP OF KERB RHS		35.605	35.645	36.16	36.513	36.813	37.1	37.143	37.077	36.85	36.848	36.918	37.005	37.092									
LIP OF KERB LHS		35.605	35.645	36.16	36.513	36.813	37.1	37.143	37.077	36.85	36.848	36.918	37.005	37.092									
EXISTING SURFACE	37.413	37.067	36.733	36.476	36.273	36.487	37.757	37.784	37.641	37.346	37.374	37.815	37.637	39.243	39.086								
CUT/FILL DEPTH	-1.456	-1.375	-1.002	-0.229	0.327	0.413	-0.57	-0.555	-0.477	-0.409	-0.439	-0.81	-0.545	-2.064	-1.611								
FINISHED CENTRELINE RL	35.957	35.692	35.731	36.247	36.6	36.9	37.187	37.229	37.163	36.937	36.935	37.005	37.092	37.179	37.474	37.484							
PEGGED CHAINAGE	0	5.378	15.774	40	60	80	100	108.929	120	140	141.978	160	180	200	220	220.4							
HORIZ. CURVE RADIUS																							

ROAD 06 LONGITUDINAL SECTION

SCALE 1:100(VERT.) SCALE 1:1000(HORIZ.)

SCALE 1:1000 (A1) 1:2000 (A3)

20 15 10 5 0 20 40 60 80 100m

2.0 1.5 1.0 0.5 0 2 4 6 8 10m

SCALE 1:100 (A1) 1:200 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: ROAD LONGITUDINAL SECTION
SHEET 3 OF 6

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702
Drawing No. DA-CR10
Rev C

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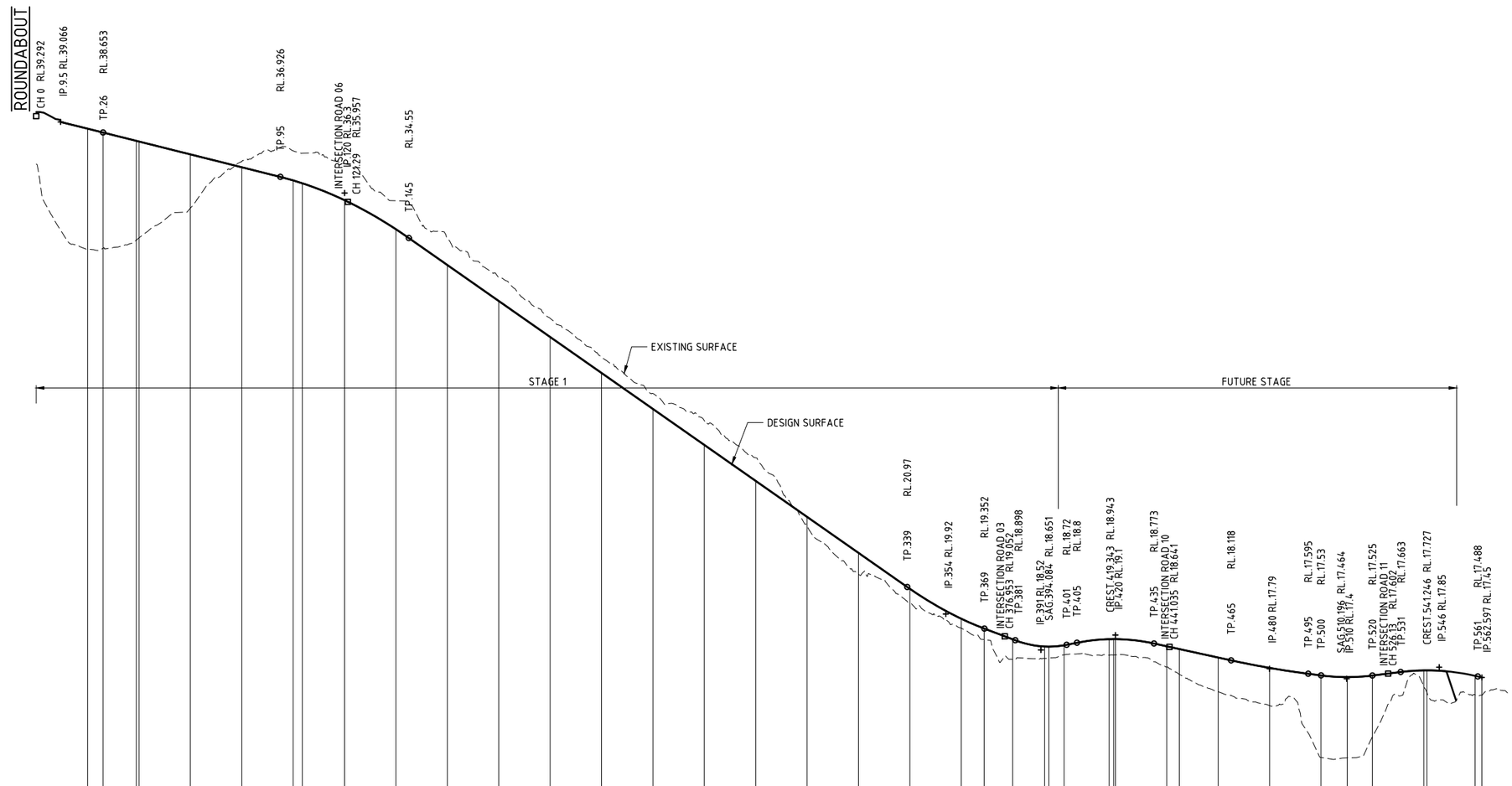
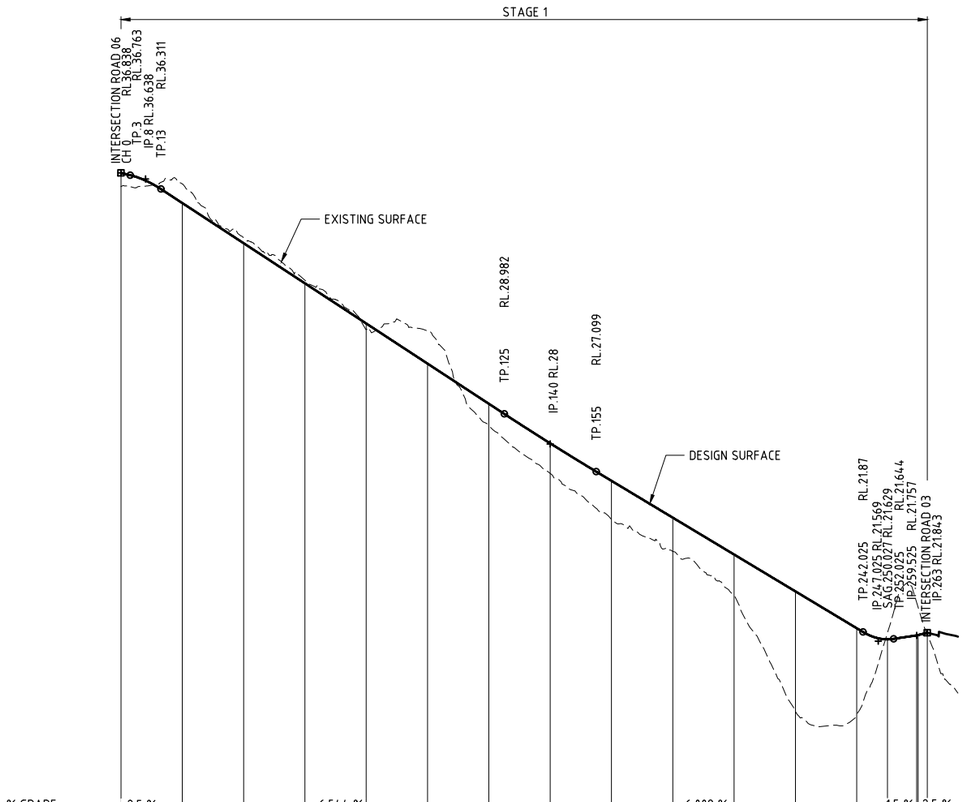
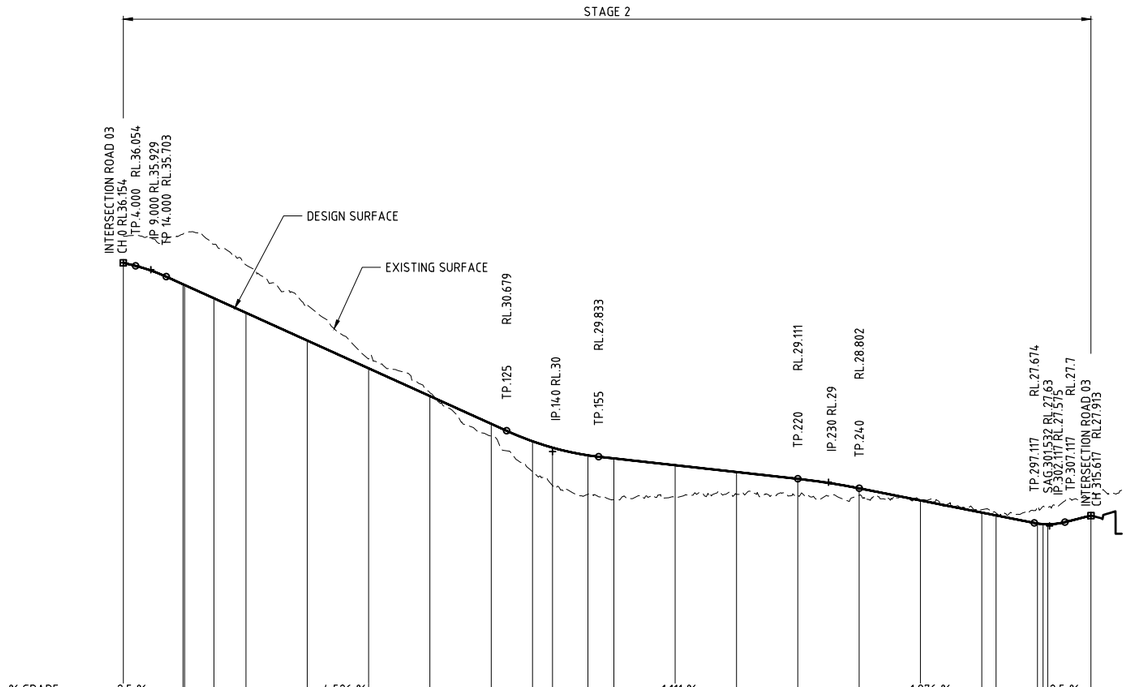
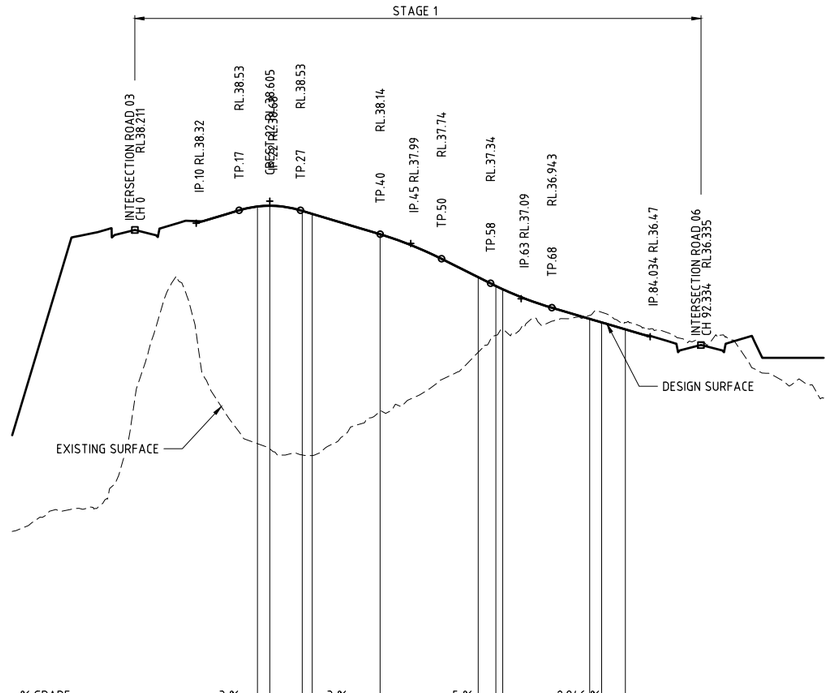

ROUNDABOUT
CH 0 RL39.292
IP 9.5 RL 39.066
RL 38.653
TP 26
RL 36.926
TP 95
INTERSECTION ROAD 06
IP 120 RL 36.3
CH 124.29 RL 35.957
RL 34.55
TP 145
EXISTING SURFACE
DESIGN SURFACE
STAGE 1
FUTURE STAGE
RL 20.97
TP 339
IP 354 RL 19.92
RL 19.352
TP 369
INTERSECTION ROAD 03
CH 376.933 RL 19.052
TP 381 RL 18.898
IP 391 RL 18.52
SAG 394.084 RL 18.651
TP 401 RL 18.72
TP 405 RL 18.8
CREST 419.343 RL 18.943
IP 420 RL 19.1
TP 435 RL 18.773
INTERSECTION ROAD 10
CH 441.035 RL 18.641
TP 465 RL 18.118
IP 480 RL 17.79
TP 495 RL 17.595
TP 500 RL 17.53
SAG 510.196 RL 17.464
IP 510 RL 17.4
TP 520 RL 17.525
INTERSECTION ROAD 11
CH 526.513 RL 17.602
TP 531 RL 17.663
CREST 541.246 RL 17.727
IP 546 RL 17.85
TP 561 RL 17.488
IP 562.597 RL 17.45
% GRADE -2.5 % -2.504 % -7 % -3.784 % 2 % -2.183 % -1.3 % 1.25 % -2.41 %
GRADE DISTANCE 16.5 D 94 D 234 D 37 D 29 D 60 D 30 D 36 D 16.597 D
PARABOLA LENGTH 50 L 30 L 20 L 30 L 30 L 30 L 20 L 30 L
PARABOLA RADIUS 1112.02 R 932.77 R 345.79 R 717.13 R 3396.23 R 784.31 R 819.66 R
DATUM R.L.9.000
LIP OF KERB RHS
LIP OF KERB LHS
EXISTING SURFACE
CUT/FILL DEPTH
FINISHED CENTRELINE RL
PEGGED CHAINAGE
HORIZ. CURVE RADIUS -100 R 15 R -40 R

| | | |

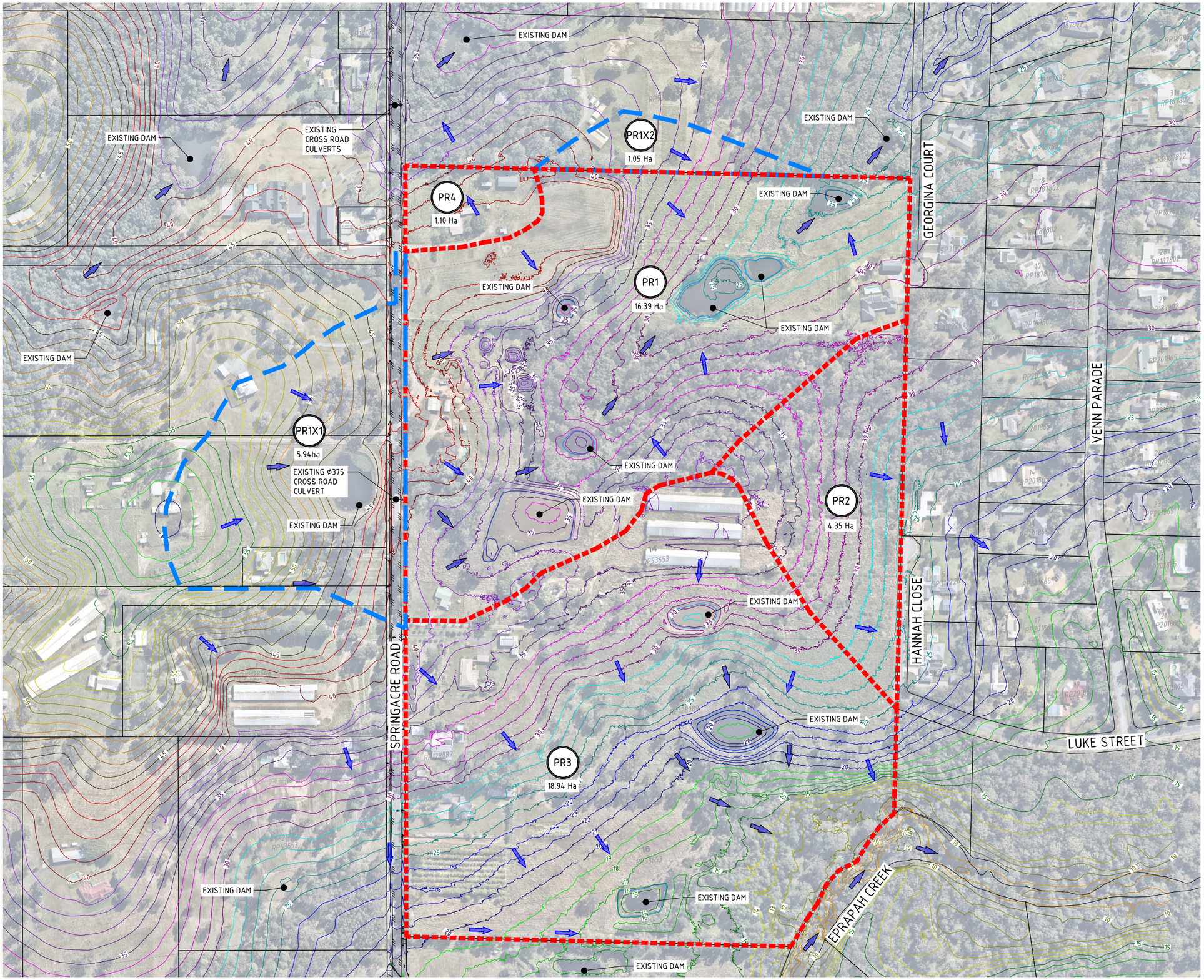

STAGE 1
INTERSECTION ROAD 06 CH 0 RL 36.838
TP 3 RL 36.763
IP 8 RL 36.638
TP 13 RL 36.311
EXISTING SURFACE
RL 28.982
TP 125
IP 140 RL 28
RL 27.099
TP 155
DESIGN SURFACE
RL 21.87
TP 242.025 RL 21.569
IP 247.025 RL 21.569
SAG 250.027 RL 21.629
TP 252.025 RL 21.644
IP 259.525 RL 21.757
INTERSECTION ROAD 03 IP 263 RL 21.843

| | | |


STAGE 2
INTERSECTION ROAD 03
CH 0 RL 36.154
TP 4.000 RL 36.054
IP 9.000 RL 35.929
TP 14.000 RL 35.703
DESIGN SURFACE
EXISTING SURFACE
TP 125 RL 30.679
IP 140 RL 30
TP 155 RL 29.833
TP 220 RL 29.111
IP 230 RL 29
TP 240 RL 28.802
TP 297.117 RL 27.674
SAG 301.532 RL 27.563
IP 302.117 RL 27.575
TP 307.117 RL 27.7
INTERSECTION ROAD 03
CH 315.617 RL 27.913


STAGE 1
INTERSECTION ROAD 03
CH 0
RL 38.211
IP 10 RL 38.32
TP 17 RL 38.53
CREST RL 38.605
TP 27 RL 38.53
TP 40 RL 38.14
IP 45 RL 37.99
TP 50 RL 37.74
TP 58 RL 37.34
IP 63 RL 37.09
TP 68 RL 36.943
IP 84.034 RL 36.47
INTERSECTION ROAD 06
CH 92.334 RL 36.335
DESIGN SURFACE
EXISTING SURFACE

| | | |



CATCHMENT TABLE

INTERNAL		EXTERNAL	
CATCHMENT No.	AREA (Ha)	CATCHMENT NO.	AREA (Ha)
PR1	16.39 Ha	PR1X1	5.94 Ha
PR2	4.35 Ha	PR1X2	1.05 Ha
PR3	18.94 Ha		
PR4	1.10 Ha		

LEGEND

- EXISTING CONTOURS
- LOT BOUNDARY
- INTERNAL STORMWATER CATCHMENT
- EXTERNAL STORMWATER CATCHMENT
- PR1 — CATCHMENT NUMBER
- STORMWATER OVERLAND FLOW
- CONCENTRATED STORMWATER FLOW

0 40 80 120 160 200m

40 30 20 10

SCALE 1:2000 (A1) 1:4000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: PRE DEVELOPMENT CATCHMENT PLAN

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-SW01 | Rev C

Plot Date: 19/06/2026 12:19:38 PM
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User: ETHAN SCHAFER

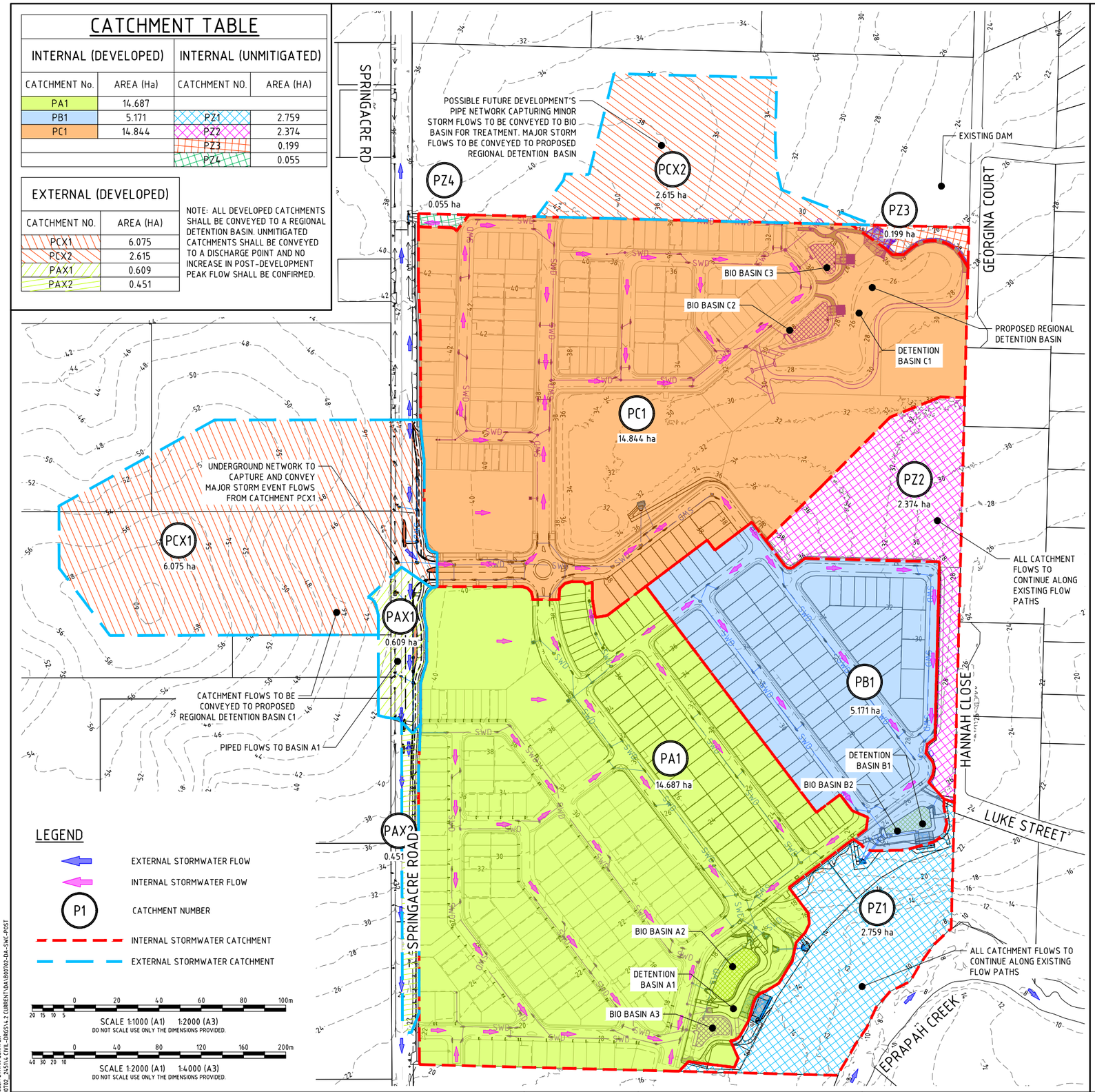
Docusign Envelope ID: 2FE5ADC6-F681-8018-819E-9CAA8E712BB0

CATCHMENT TABLE

INTERNAL (DEVELOPED)		INTERNAL (UNMITIGATED)	
CATCHMENT No.	AREA (Ha)	CATCHMENT NO.	AREA (HA)
PA1	14.687		
PB1	5.171	PZ1	2.759
PC1	14.844	PZ2	2.374
		PZ3	0.199
		PZ4	0.055

EXTERNAL (DEVELOPED)	
CATCHMENT NO.	AREA (HA)
PCX1	6.075
PCX2	2.615
PAX1	0.609
PAX2	0.451

NOTE: ALL DEVELOPED CATCHMENTS SHALL BE CONVEYED TO A REGIONAL DETENTION BASIN. UNMITIGATED CATCHMENTS SHALL BE CONVEYED TO A DISCHARGE POINT AND NO INCREASE IN POST-DEVELOPMENT PEAK FLOW SHALL BE CONFIRMED.

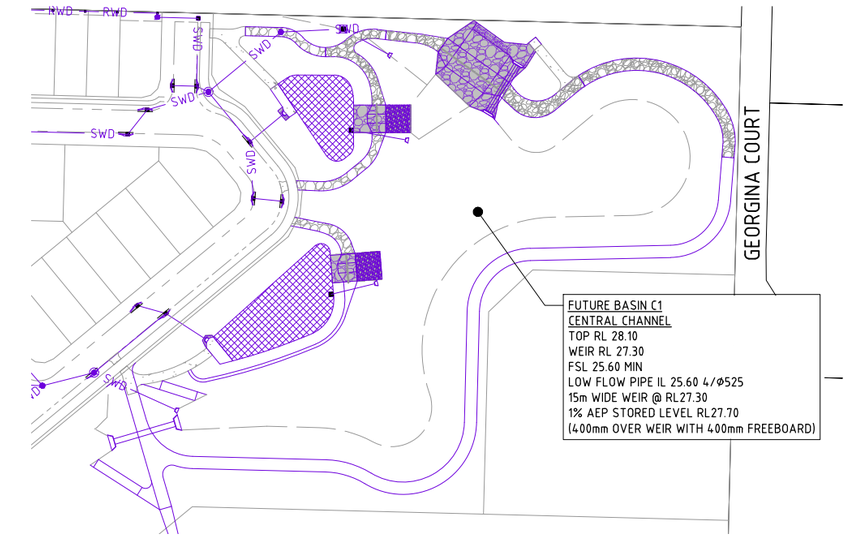


LEGEND

- EXTERNAL STORMWATER FLOW
- INTERNAL STORMWATER FLOW
- P1 — CATCHMENT NUMBER
- INTERNAL STORMWATER CATCHMENT
- EXTERNAL STORMWATER CATCHMENT

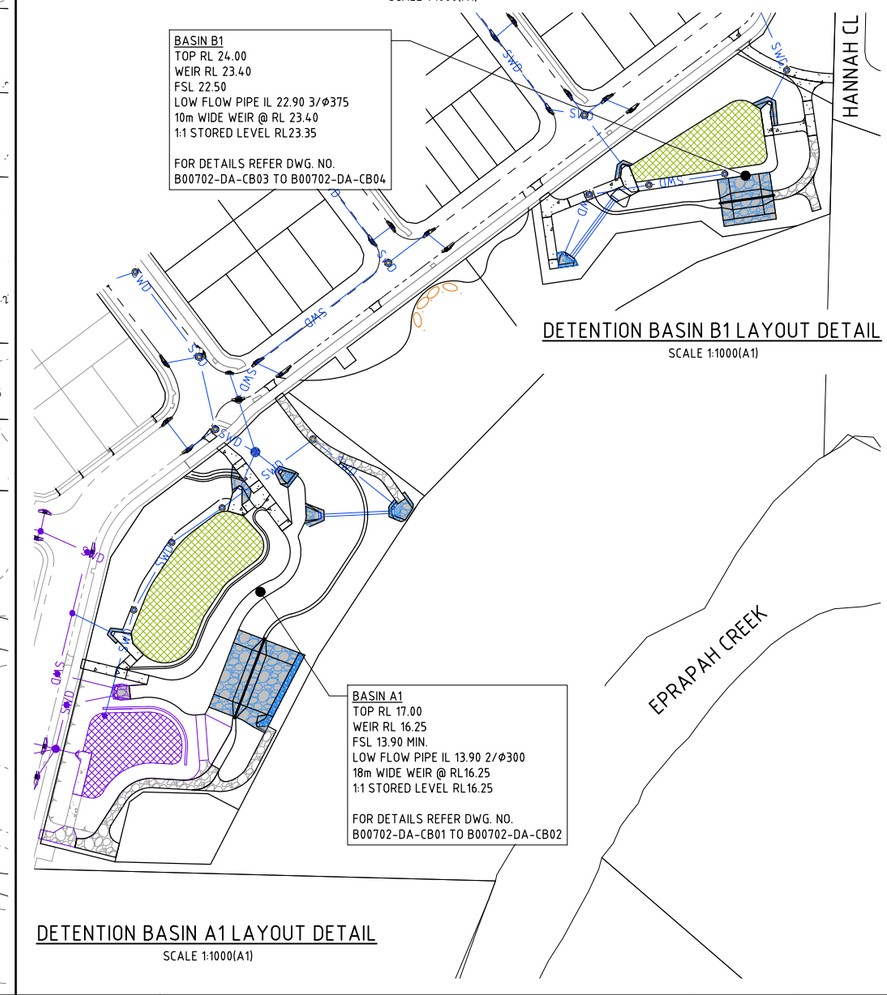
SCALE 1:1000 (A1) 1:2000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

SCALE 1:2000 (A1) 1:4000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.



DETENTION BASIN C1 LAYOUT DETAIL

SCALE 1:1000(A1)



DETENTION BASIN B1 LAYOUT DETAIL

SCALE 1:1000(A1)

DETENTION BASIN A1 LAYOUT DETAIL

SCALE 1:1000(A1)

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: POST DEVELOPMENT CATCHMENT PLAN

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702
Drawing No. DA-SW02
Rev C

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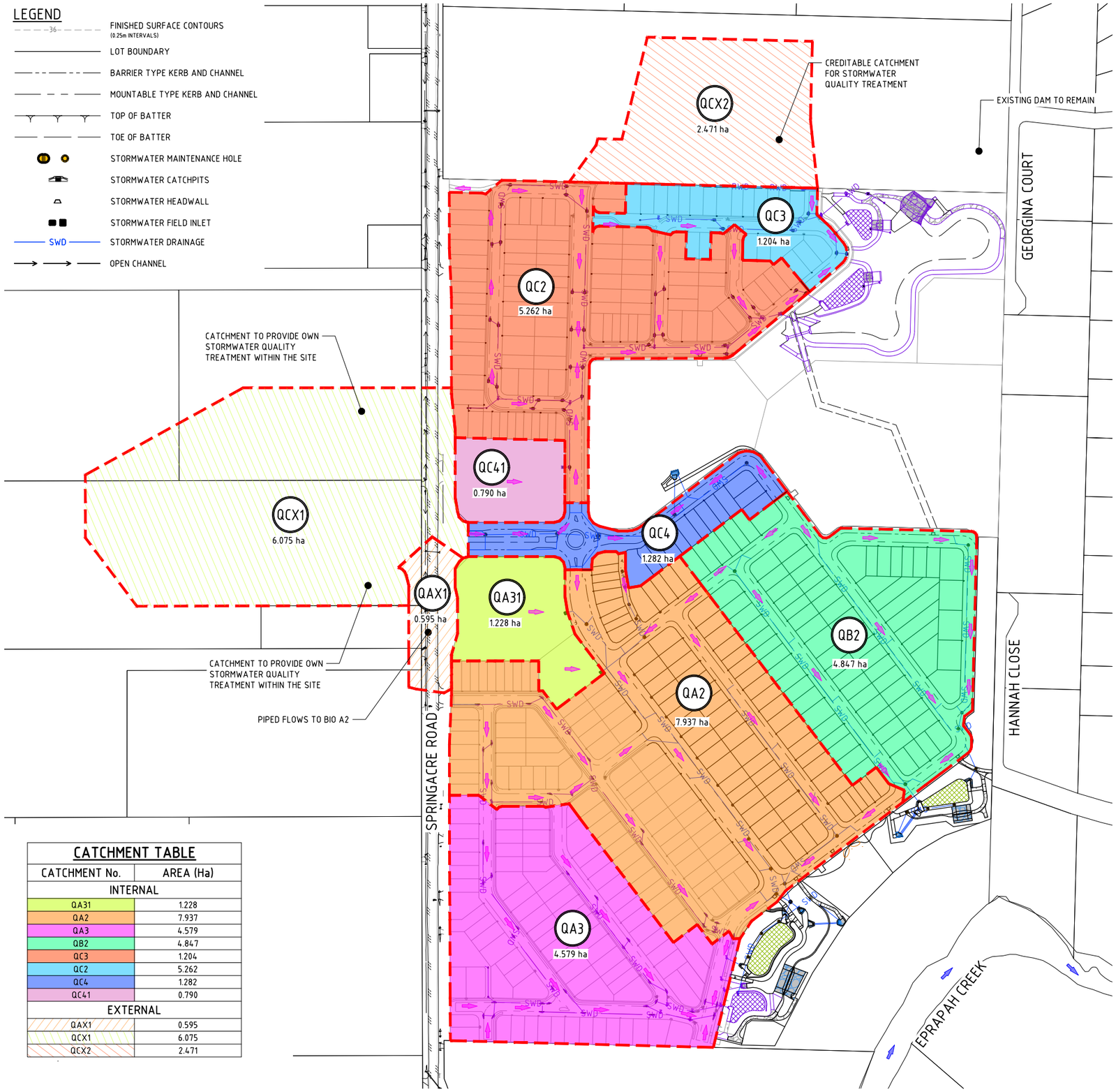
User: ETHAN SCHAFER

Docusign Envelope ID: 2FE5ADC6-F681-8018-819E-9CAA8E712BB0

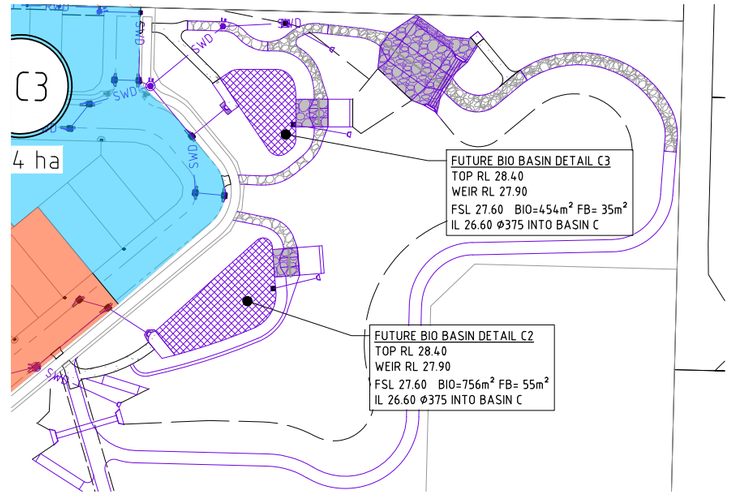
LEGEND

- FINISHED SURFACE CONTOURS (0.25m INTERVALS)
- LOT BOUNDARY
- BARRIER TYPE KERB AND CHANNEL
- MOUNTABLE TYPE KERB AND CHANNEL
- TOP OF BATTER
- TOE OF BATTER
- STORMWATER MAINTENANCE HOLE
- STORMWATER CATCHPITS
- STORMWATER HEADWALL
- STORMWATER FIELD INLET
- SWD — STORMWATER DRAINAGE
- OPEN CHANNEL



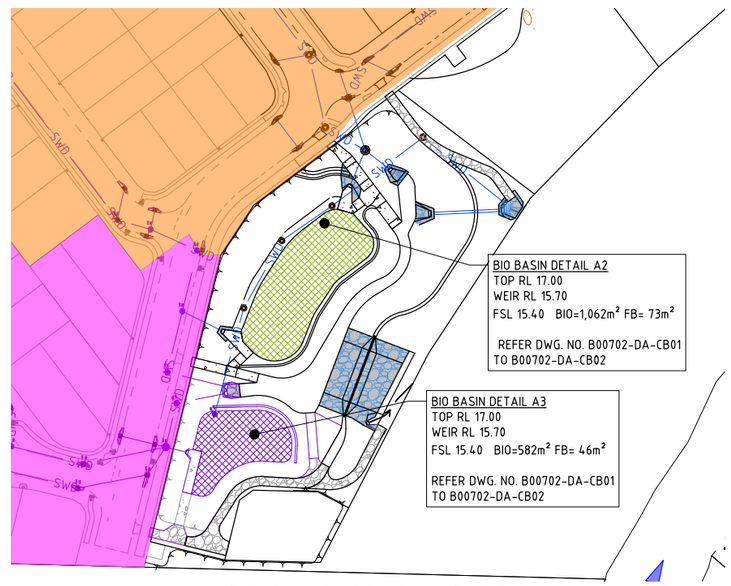
CATCHMENT TABLE

CATCHMENT No.	AREA (Ha)
INTERNAL	
QA31	1.228
QA2	7.937
QA3	4.579
QB2	4.847
QC3	1.204
QC2	5.262
QC4	1.282
QC41	0.790
EXTERNAL	
QAX1	0.595
QCX1	6.075
QCX2	2.471



FUTURE BIO BASIN C2 AND C3 LAYOUT DETAIL
SCALE 1:1000(A1)

BIO BASIN B2 LAYOUT DETAIL
SCALE 1:1000(A1)



BIO BASIN A2 AND A3 LAYOUT DETAIL
SCALE 1:1000(A1)

0 40 80 120 160 200m
40 30 20 10
SCALE 1:2000 (A1) 1:4000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

0 20 40 60 80 100m
20 15 10 5
SCALE 1:1000 (A1) 1:2000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: STORMWATER QUALITY CATCHMENT PLAN

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-SW03 | Rev C

Plot Date: 19/06/2026 12:26:31 PM
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User: ETHAN SCHAFER

Docusign Envelope ID: 2FE5ADC6-F681-8018-819E-9CAA8E712BB0

STAGE 3

STAGE 4

ROAD 03

PROPOSED SHARED PATH 2.5m WIDE

HIGH FLOW BYPASS MANHOLE TO DIVERT LARGER STORMWATER FLOWS DIRECTLY INTO BASIN

ELECTRICAL PAD MOUNT TRANSFORMER SITE

REFER LANDSCAPE PACKAGE FOR VERGE FEATURES AND TREATMENTS

BIO BASIN A2
TOP RL 15.70
WEIR RL 15.70
FSL 15.40
IL 14.30

UNDER DRAINS CONNECTION POINT DISCHARGE MANHOLES TO BE 75mm PROUD OF SURFACE

UNDER DRAINS CONNECTION POINT DISCHARGE MANHOLES TO BE 75mm PROUD OF SURFACE

1 IN 6 MAX INFORMAL ACCESS AREA

1 IN 6 MAX CONCRETE ACCESS RAMP

1 IN 6 MAX INFORMAL ACCESS AREA

1 IN 3 MAX SLOPE

2xDN300 RCP LOW FLOW OUTLET PIPES DISCHARGING TO OPEN SPACE

FUTURE HIGH FLOW BYPASS MANHOLE

UNDER DRAINS CONNECTION POINT

1 IN 6 MAX CONCRETE ACCESS RAMP

BIO BASIN A3
TOP RL 15.70
WEIR RL 15.70
FSL 15.40
IL 14.40

HIGH FLOW WEIR

UNDER DRAINS DISCHARGE TO OPEN SPACE

ELECTRICAL PAD MOUNT TRANSFORMER SITE

1 IN 6 MAX INFORMAL ACCESS AREA

SEWER PUMP STATION

1 IN 6 MAX INFORMAL ACCESS AREA

2A3 CB02

LEGEND

- FINISHED SURFACE CONTOURS (0.25m INTERVALS)
- STORMWATER MAINTENANCE HOLE
- STORMWATER CATCHPITS
- STORMWATER HEADWALL
- STORMWATER FIELD INLET
- STORMWATER DRAINAGE
- BARRIER TYPE KERB AND CHANNEL
- MOUNTABLE TYPE KERB AND CHANNEL
- EDGE OF SURFACING
- TOP OF BATTER
- TOE OF BATTER
- OPEN CHANNEL
- SLOTTED PVC PIPES
- UNDERDRAINAGE PIPES
- BIO-RETENTION FILTER AREA
- CONCRETE
- LANDSCAPING
- GROUTED ROCK PITCHING
- GRAVEL TRACK 150mm TYPE 2.3 ROAD BASE
- SANDSTONE BOULDER RETAINING WALL
- LOT BOUNDARY

SCALE 1:250 (A1) 1:500 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

DETENTION BASIN A1 AND BIORETENTION BASINS A2 AND A3 - LAYOUT PLAN

SCALE 1:250 (A1) 1:500 (A3)

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: BIORETENTION BASIN A2 AND A3 LAYOUT PLAN

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. B00702-DA-CB01 | Rev C

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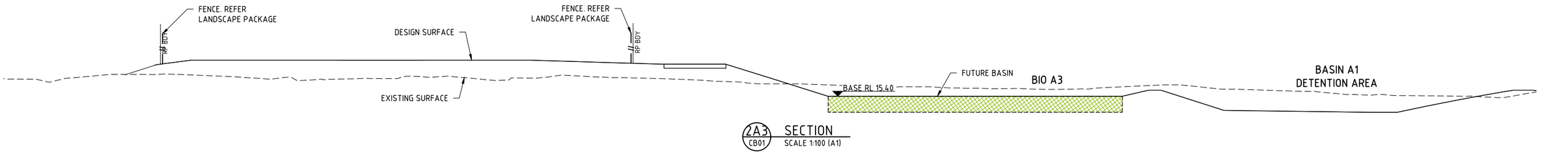
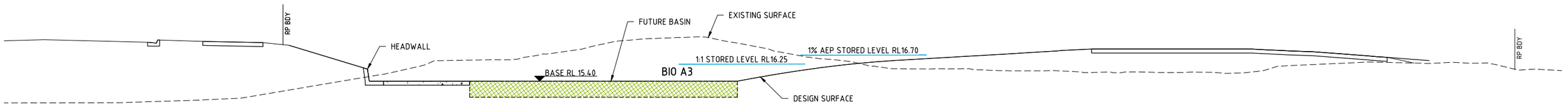
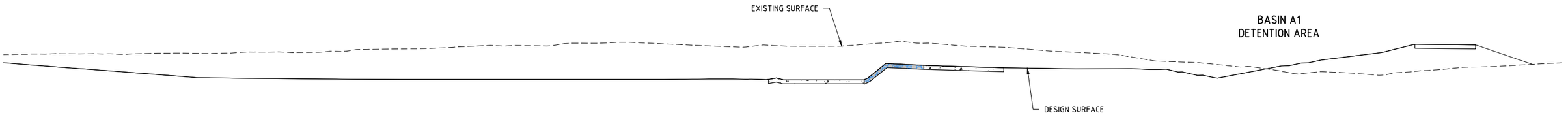


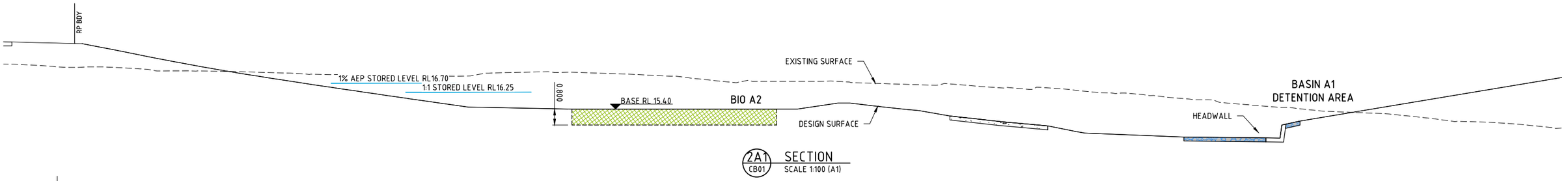
2A3 CB01 SECTION
SCALE 1:100 (A1)



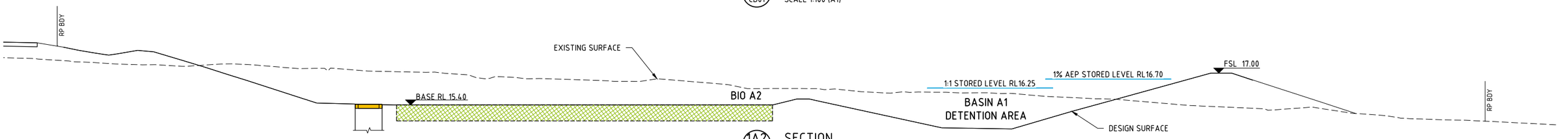
1A3 CB01 SECTION
SCALE 1:100 (A1)



2A2 CB01 SECTION
SCALE 1:100 (A1)



2A1 CB01 SECTION
SCALE 1:100 (A1)



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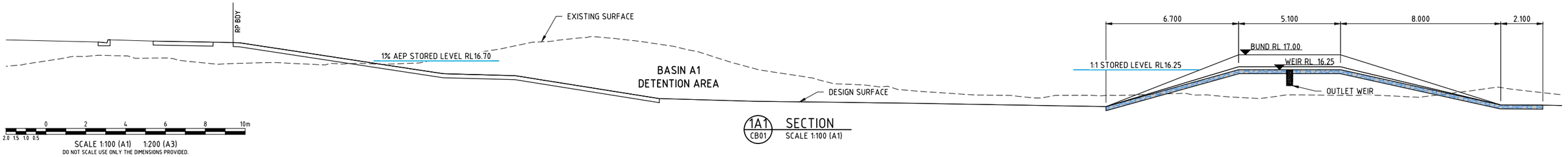
SCALE 1:100 (A1)



1A1 CB01 SECTION
SCALE 1:100 (A1)

0 2 4 6 8 10m
2.0 1.5 1.0 0.5
SCALE 1:100 (A1) 1:200 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Angeiman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: BIORETENTION BASIN A2 AND A3 CROSS SECTIONS

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CB02 | Rev C

Plot Date: 19/06/2026 12:29:50 PM
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User: ETHAN SCHAFER

Docusign Envelope ID: 2FE5ADC6-F681-8018-819E-9CAA8E712BB0

LEGEND

- FINISHED SURFACE CONTOURS (0.25m INTERVALS) — 57.50
- STORMWATER MAINTENANCE HOLE
- STORMWATER CATCHPITS
- STORMWATER HEADWALL
- STORMWATER FIELD INLET
- SWD — STORMWATER DRAINAGE
- BARRIER TYPE KERB AND CHANNEL
- MOUNTABLE TYPE KERB AND CHANNEL
- EDGE OF SURFACING
- TOP OF BATTER
- TOE OF BATTER
- OPEN CHANNEL
- SLOTTED PVC PIPES
- UNDERDRAINAGE PIPES
- BIO-RETENTION FILTER AREA
- CONCRETE
- LANDSCAPING
- GROUTED ROCK PITCHING
- GRAVEL TRACK 150mm TYPE 2.3 ROAD BASE
- SANDSTONE BOULDER RETAINING WALL
- LOT BOUNDARY

ROAD 03
ROAD 08
ROAD 07
HANNAH CLOSE
LUKE STREET

2B1 CB04
2B2 CB04
1B2 CB04
1B1 CB04

BIO BASIN B2
TOP RL 24.00
WEIR RL 23.40
FSL 22.50
IL 21.50

EMERGENCY EGRESS AND SHARED PATH CONNECTION FO LUKE STREET

1 IN 6 MAX CONCRETE ACCESS RAMP
1 IN 6 MAX CONCRETE ACCESS RAMP
1 IN 6 MAX CONCRETE ACCESS RAMP
1 IN 6 MAX GRAVEL ACCESS RAMP

UNDER DRAINS CONNECTION POINT
DISCHARGE MANHOLES TO BE
75mm PROUD OF SURFACE

HIGH FLOW WEIR

3xDN375 RCP LOW FLOW OUTLET
PIPES DISCHARGING TO OPEN SPACE

REFER LANDSCAPE PACKAGE
FOR VERGE FEATURES AND
TREATMENTS

SWD
QMS

0 5 10 15 20 25m
5 3.75 2.5 1.25

SCALE 1:250 (A1) 1:500 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

DETENTION BASIN B1 AND BIORETENTION BASIN B2 - LAYOUT PLAN

SCALE 1:250 (A1) 1:500 (A3)

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: BIORETENTION BASIN B2 LAYOUT PLAN

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No.	Drawing No.	Rev
B00702	DA-CB03	C

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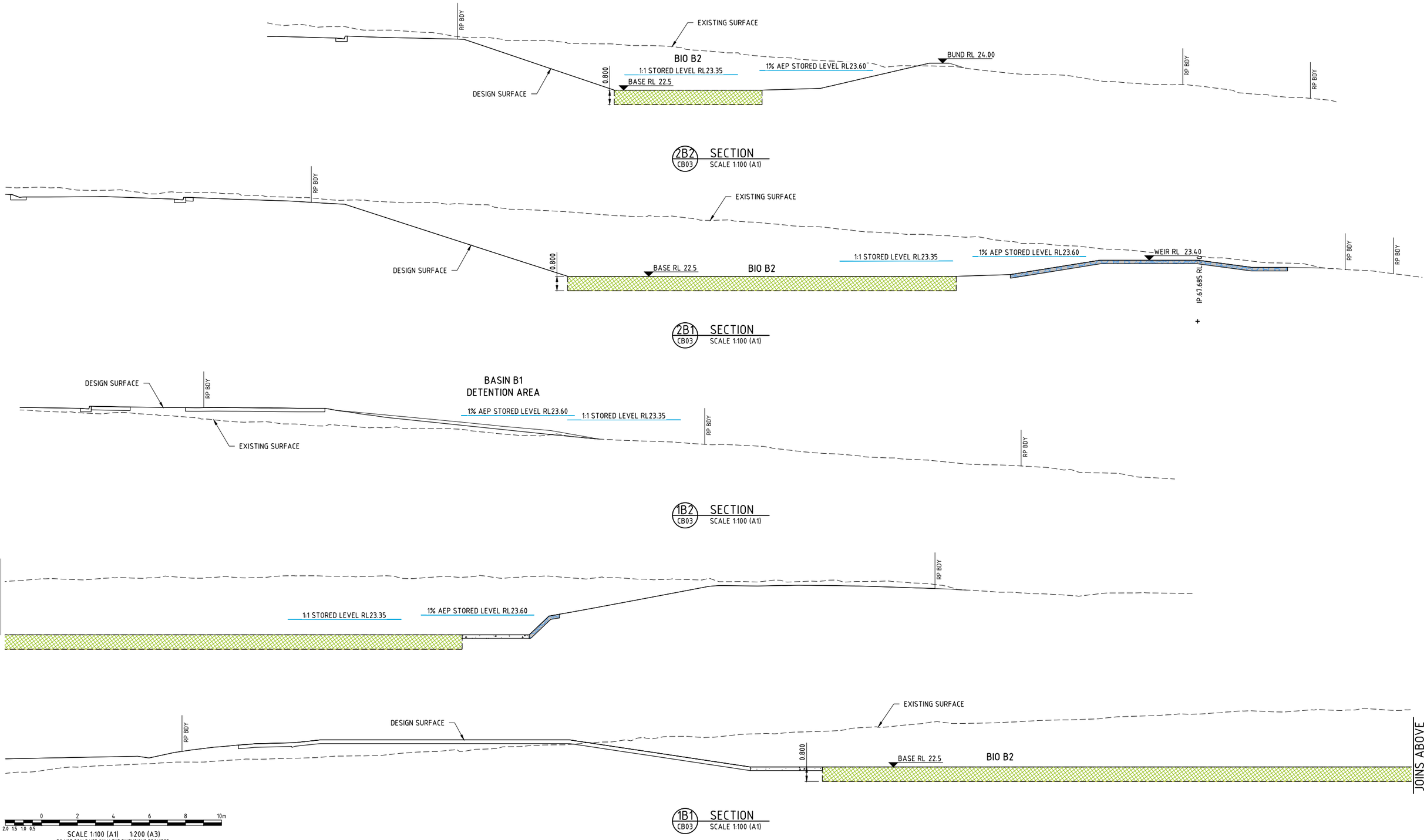

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: BIORETENTION BASIN B2
CROSS SECTIONS

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CB04 | Rev C

Plot Date: 19/06/2026 12:21:05 PM
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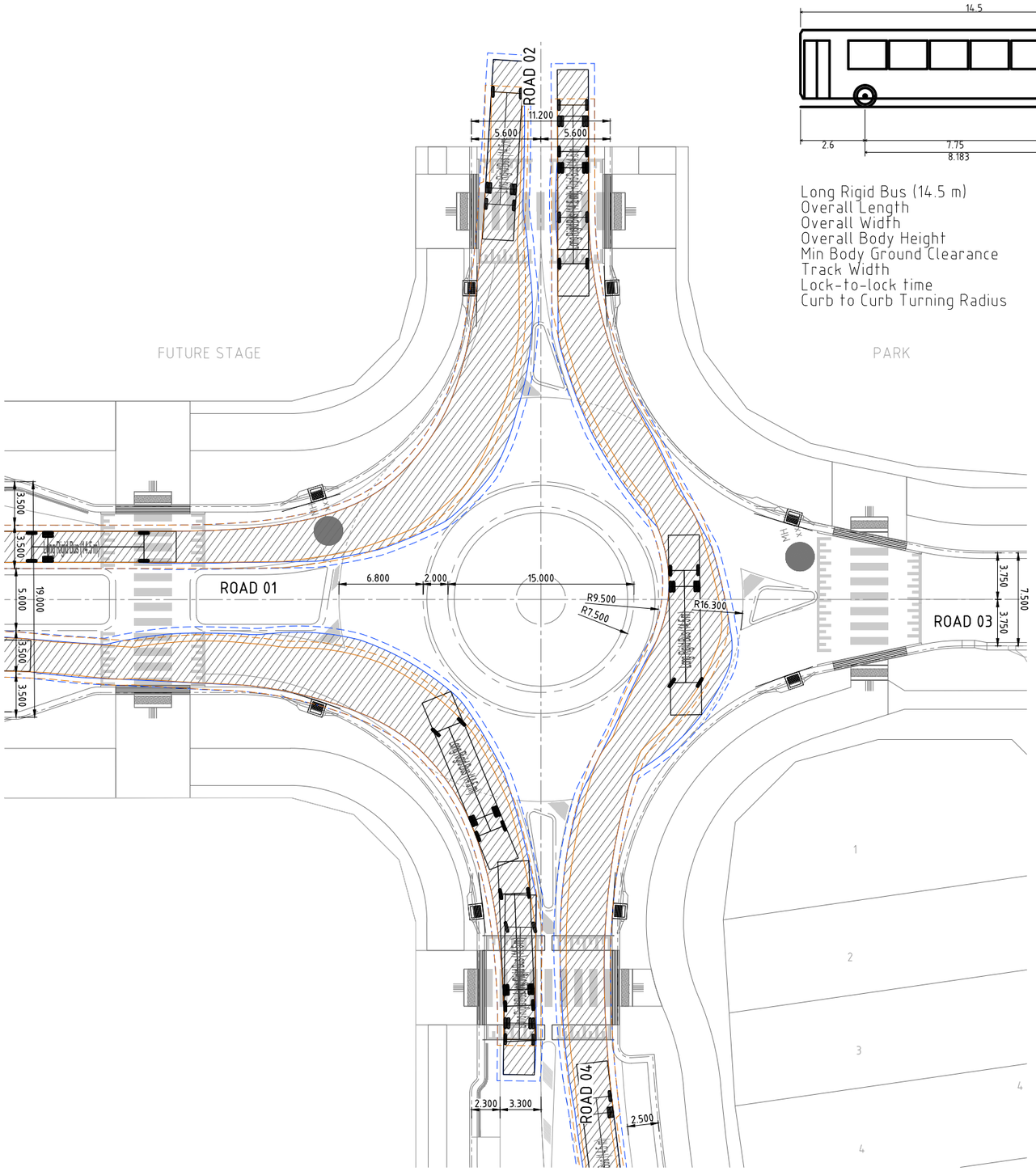
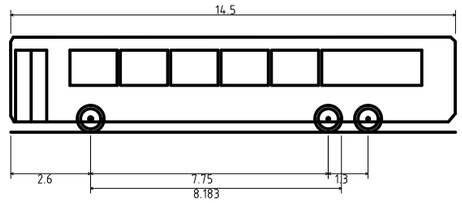
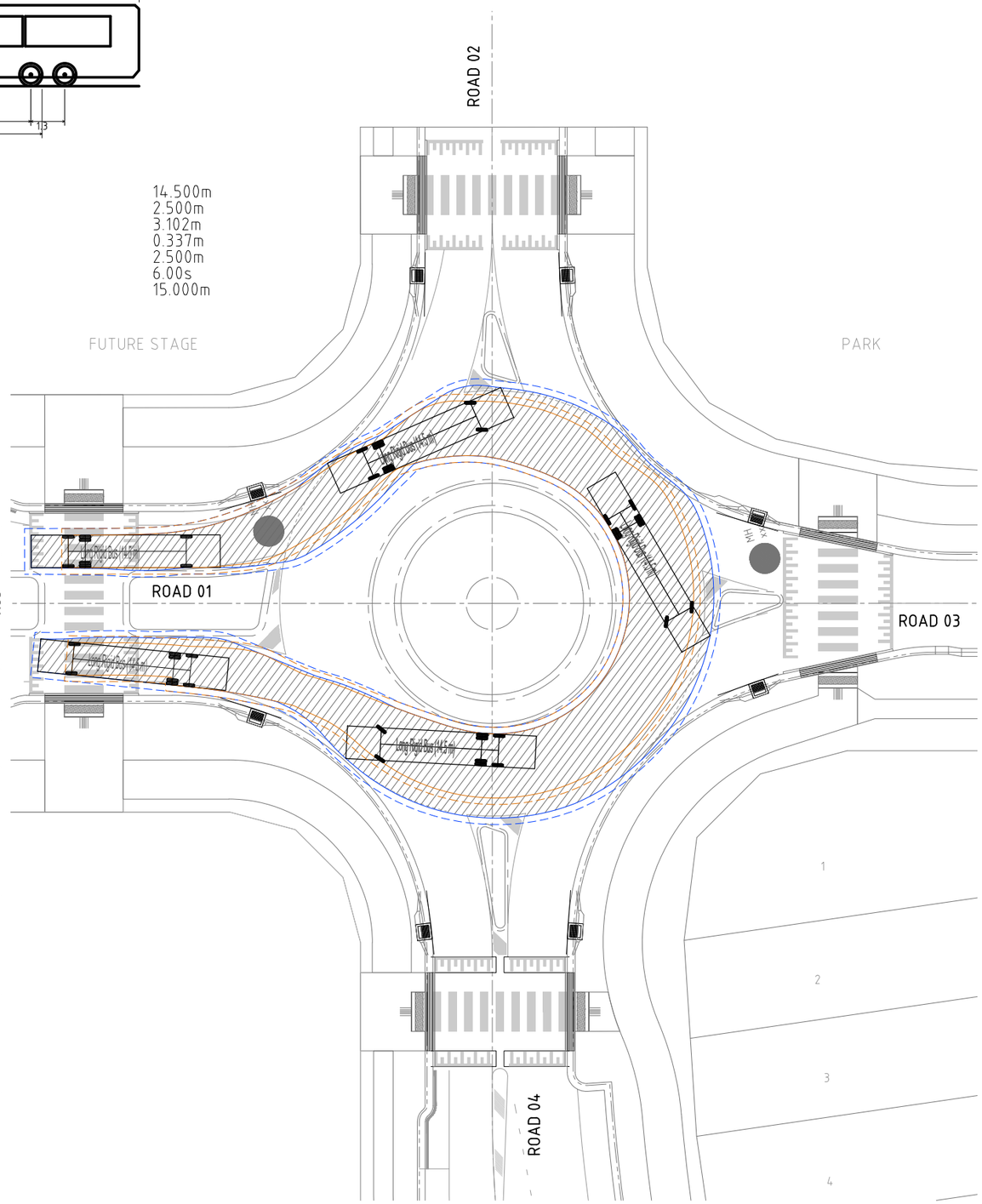




Long Rigid Bus (14.5 m)	
Overall Length	14.500m
Overall Widfh	2.500m
Overall Body Height	3.102m
Min Body Ground Clearance	0.337m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m



14.5m BUS TURNING TEMPLATE - ROAD 01, 02, 04

SCALE 1:200

14.5m BUS TURNING TEMPLATE - ROAD 01 to ROAD 01

SCALE 1:200

0 4 8 12 16 20m

4 3 2 1

SCALE 1:200 (A1) 1:400 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

NOTE

14.5m BUS CHECK VEHICLE FOR REFERENCE ONLY

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Ingelman

Registered Engineer

Date 19/6/2026

9424

Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: TURNING TEMPLATE
DESIGN VEHICLE 14.5M BUS
SHEET 1 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No.	Drawing No.	Rev
B00702	DA-CT01	C

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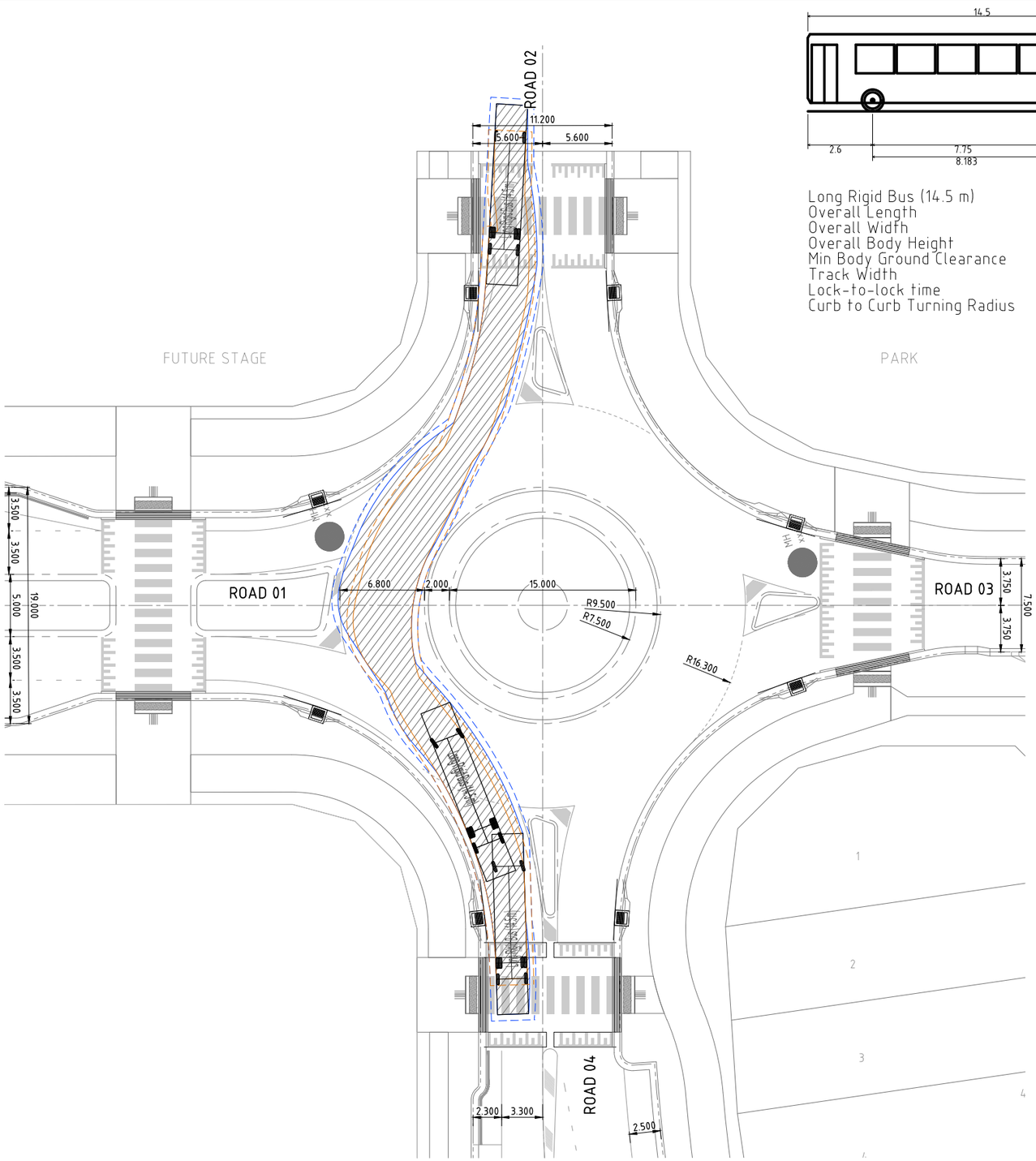
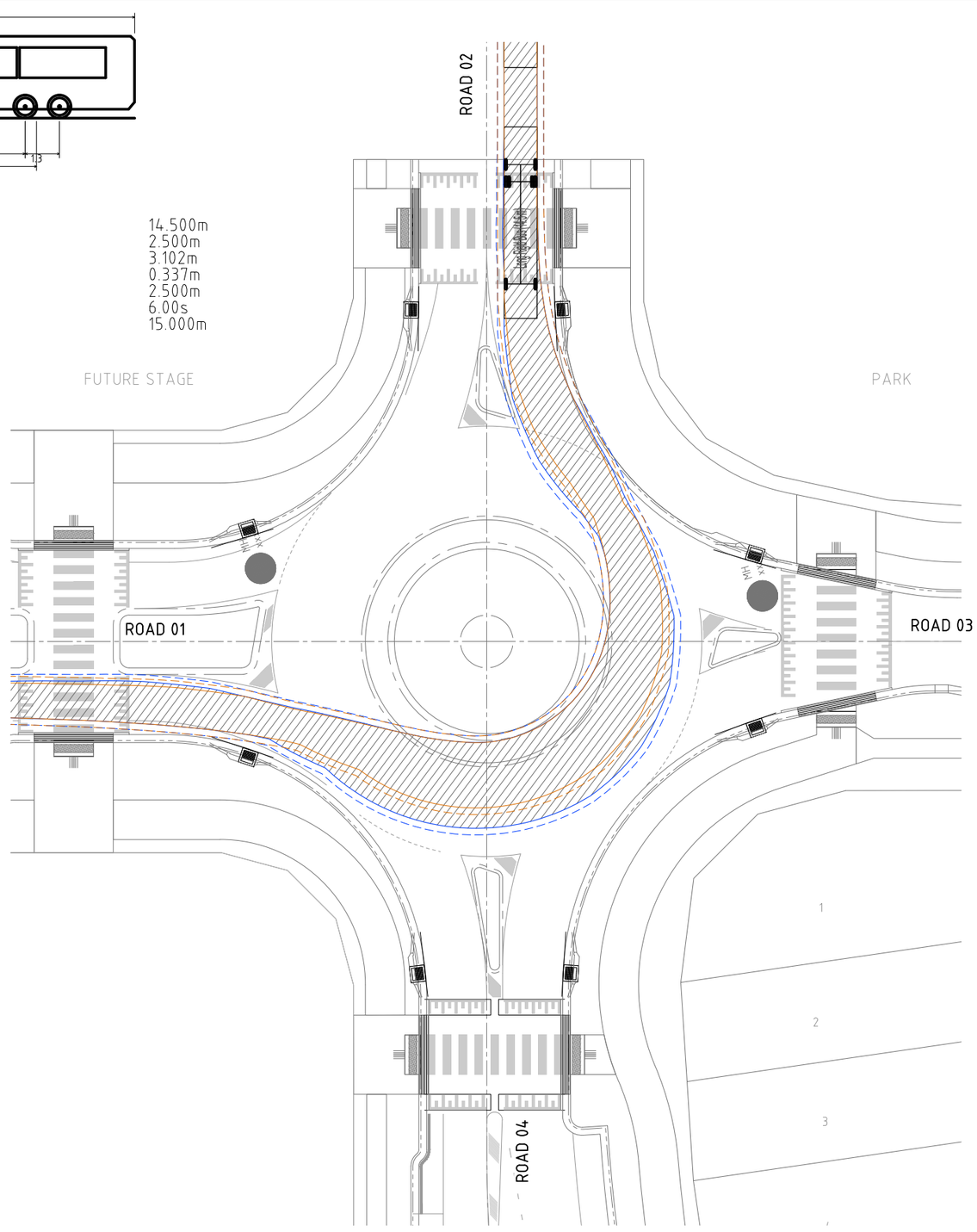


14.5m BUS TURNING TEMPLATE - ROAD 04 to ROAD 02

SCALE 1:200

Long Rigid Bus (14.5 m)	
Overall Length	14.500m
Overall Widfh	2.500m
Overall Body Height	3.102m
Min Body Ground Clearance	0.337m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m



14.5m BUS TURNING TEMPLATE - ROAD 02 to ROAD 01

SCALE 1:200

0 4 8 12 16 20m

4 3 2 1

SCALE 1:200 (A1) 1:400 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

NOTE

14.5m BUS CHECK VEHICLE FOR REFERENCE ONLY

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Ingleman

Registered Engineer

Date 19/6/2026

9424

Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: TURNING TEMPLATE
DESIGN VEHICLE 14.5M BUS
SHEET 2 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CT02 | Rev C

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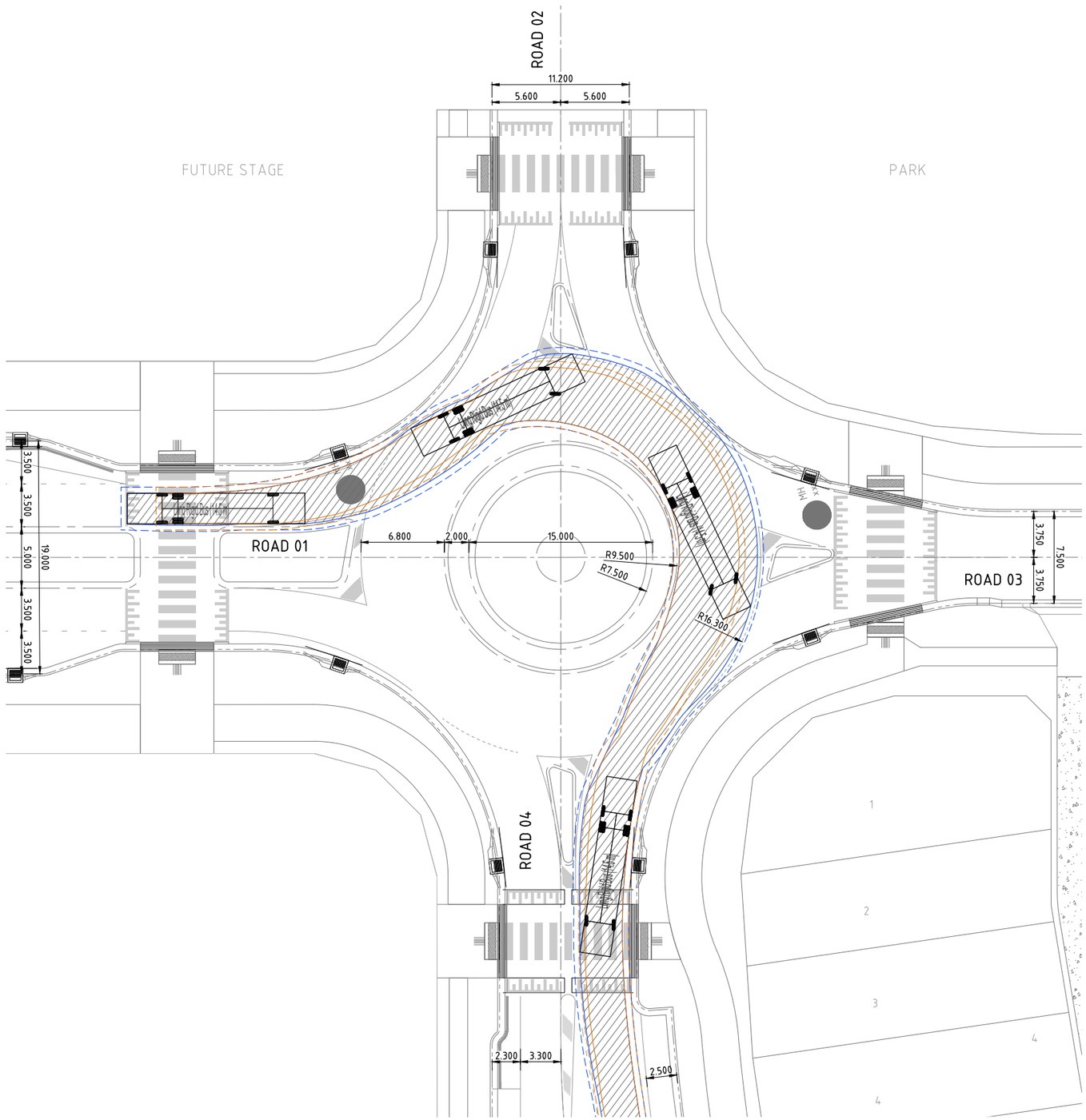

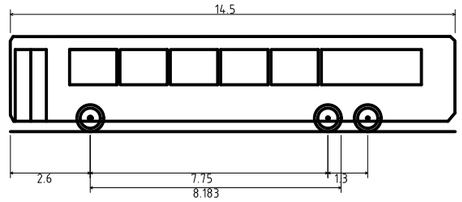

Long Rigid Bus (14.5 m)	
Overall Length	14.500m
Overall Widfh	2.500m
Overall Body Height	3.102m
Min Body Ground Clearance	0.337m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

14.5m BUS TURNING TEMPLATE - ROAD 01 to ROAD 04

SCALE 1:200

0 4 8 12 16 20m
4 3 2 1
SCALE 1:200 (A1) 1:400 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

NOTE
14.5m BUS CHECK VEHICLE FOR REFERENCE ONLY

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: TURNING TEMPLATE
DESIGN VEHICLE 14.5M BUS
SHEET 3 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. B00702-DA-CT03 | Rev C

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Plot Date: 19/06/2026 12:22:33 PM
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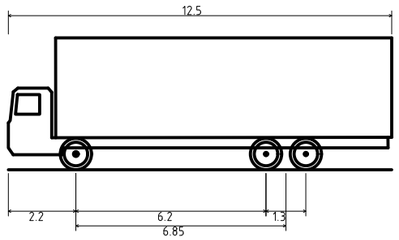
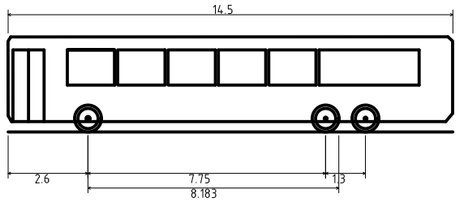


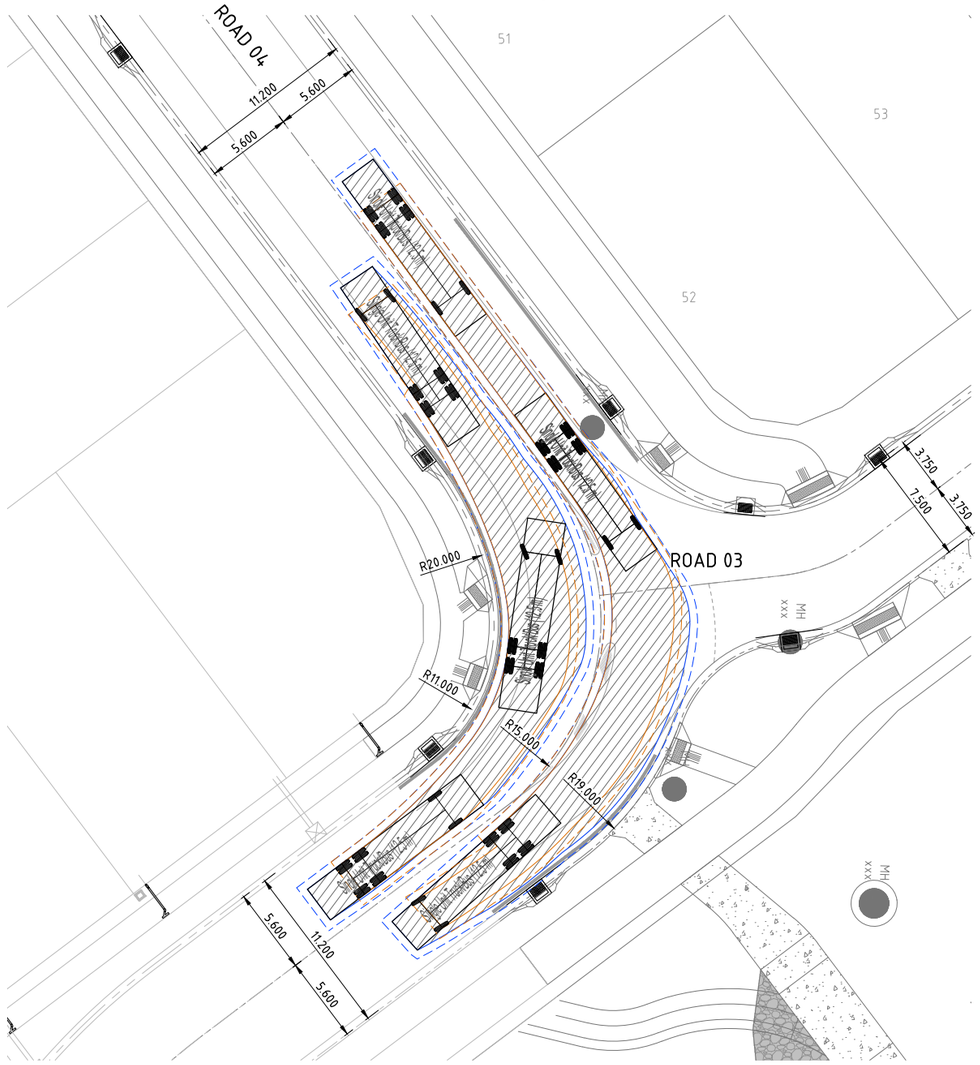
Single Unit Truck/Bus (12.5 m)

Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m



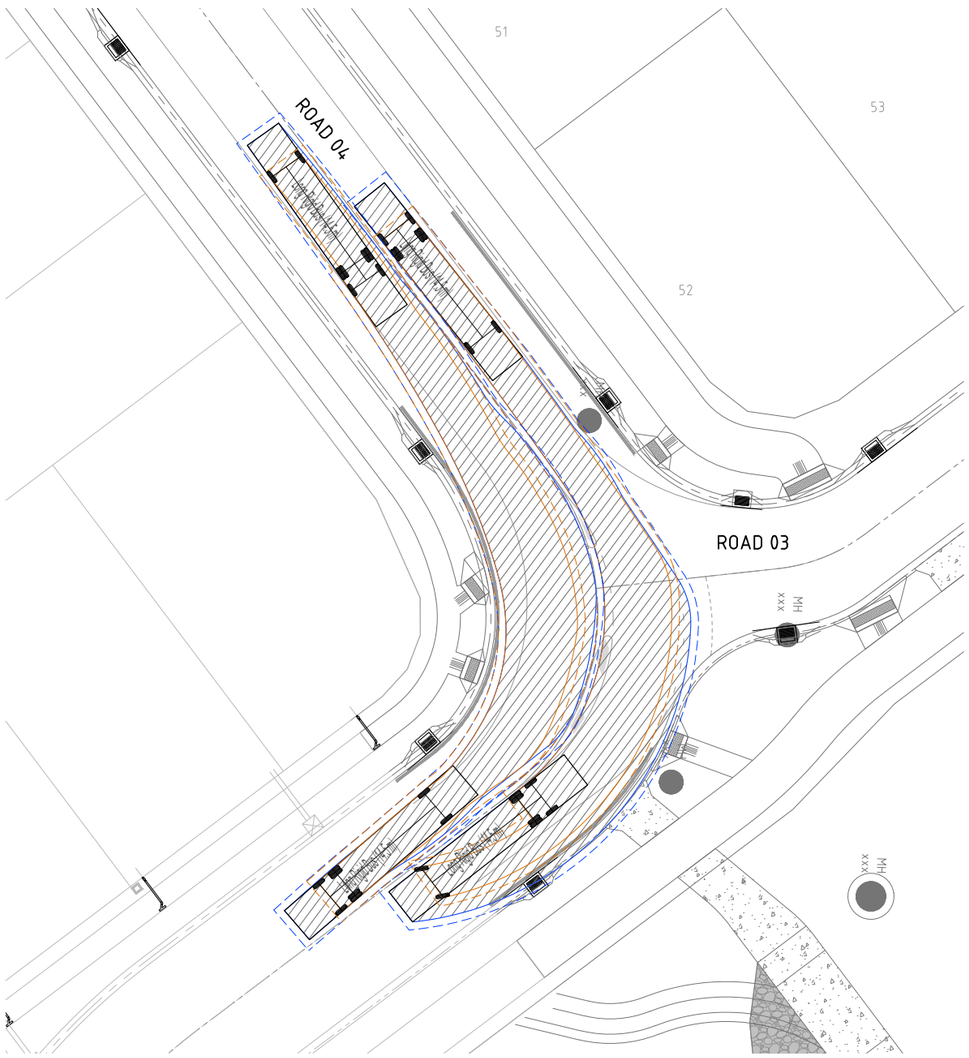
Long Rigid Bus (14.5 m)

Overall Length	14.500m
Overall Width	2.500m
Overall Body Height	3.102m
Min Body Ground Clearance	0.337m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m



12.5m TRUCK/BUS TURNING TEMPLATE - ROAD 04

SCALE 1:200



14.5m BUS TURNING TEMPLATE - ROAD 04

SCALE 1:200

NOTE

14.5m BUS CHECK VEHICLE FOR REFERENCE ONLY

0 4 8 12 16 20m

4 3 2 1

SCALE 1:200 (A1) 1:400 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Angelman

Registered Engineer

Date 19/6/2026

9424

Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: TURNING TEMPLATE
DESIGN VEHICLE 14.5M BUS
SHEET 4 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. B00702-DA-CT04 | Rev C

Plot Date: 19/06/2026 12:22:40 PM User: ETHAN SCHAEFER
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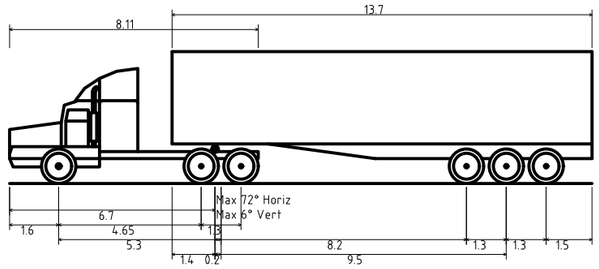
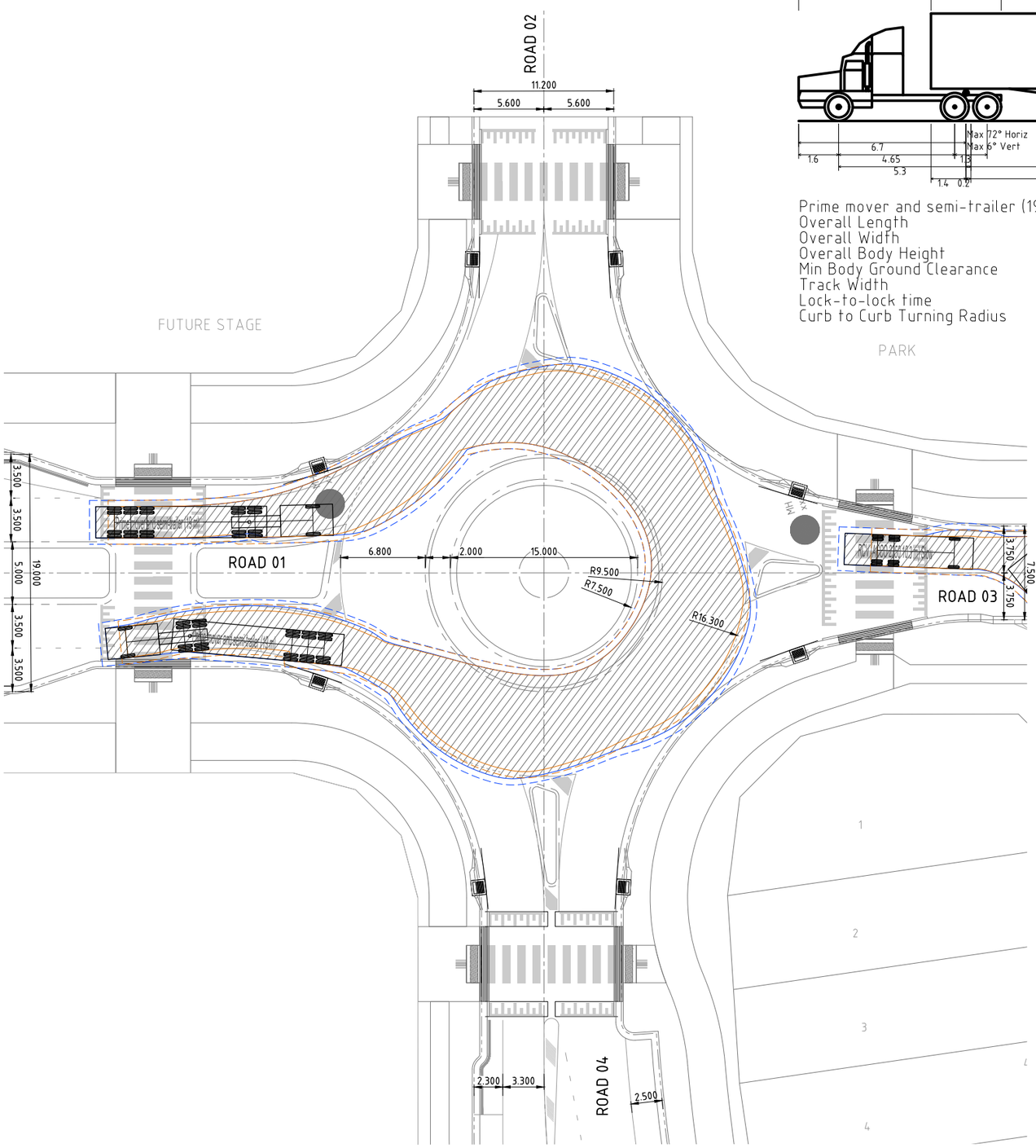


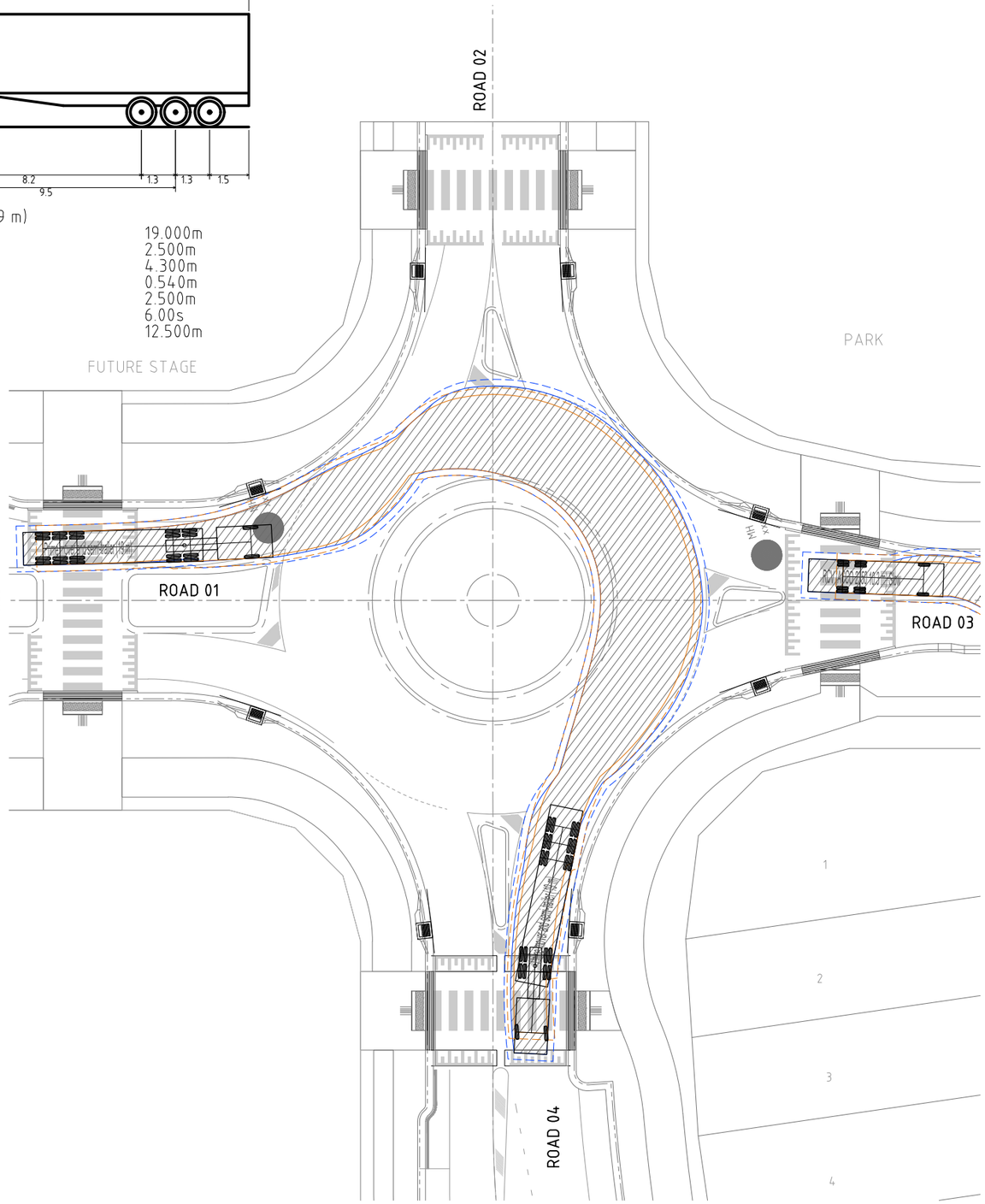
Prime mover and semi-trailer (19 m)

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m



19m CHECK VEHICLE TURNING TEMPLATE - ROAD 01 to ROAD 01

SCALE 1:200



19m CHECK VEHICLE TURNING TEMPLATE - ROAD 01 to ROAD 04

SCALE 1:200

0 4 8 12 16 20m

4 3 2 1

SCALE 1:200 (A1) 1:400 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

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ENGINEERING CERTIFICATION

Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: TURNING TEMPLATE
CHECK VEHICLE 19M SEMI TRUCK
SHEET 1 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

N

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CT05 | Rev C

Plot Date: 19/06/2026 12:22:43 PM User: ETHAN SCHAFER
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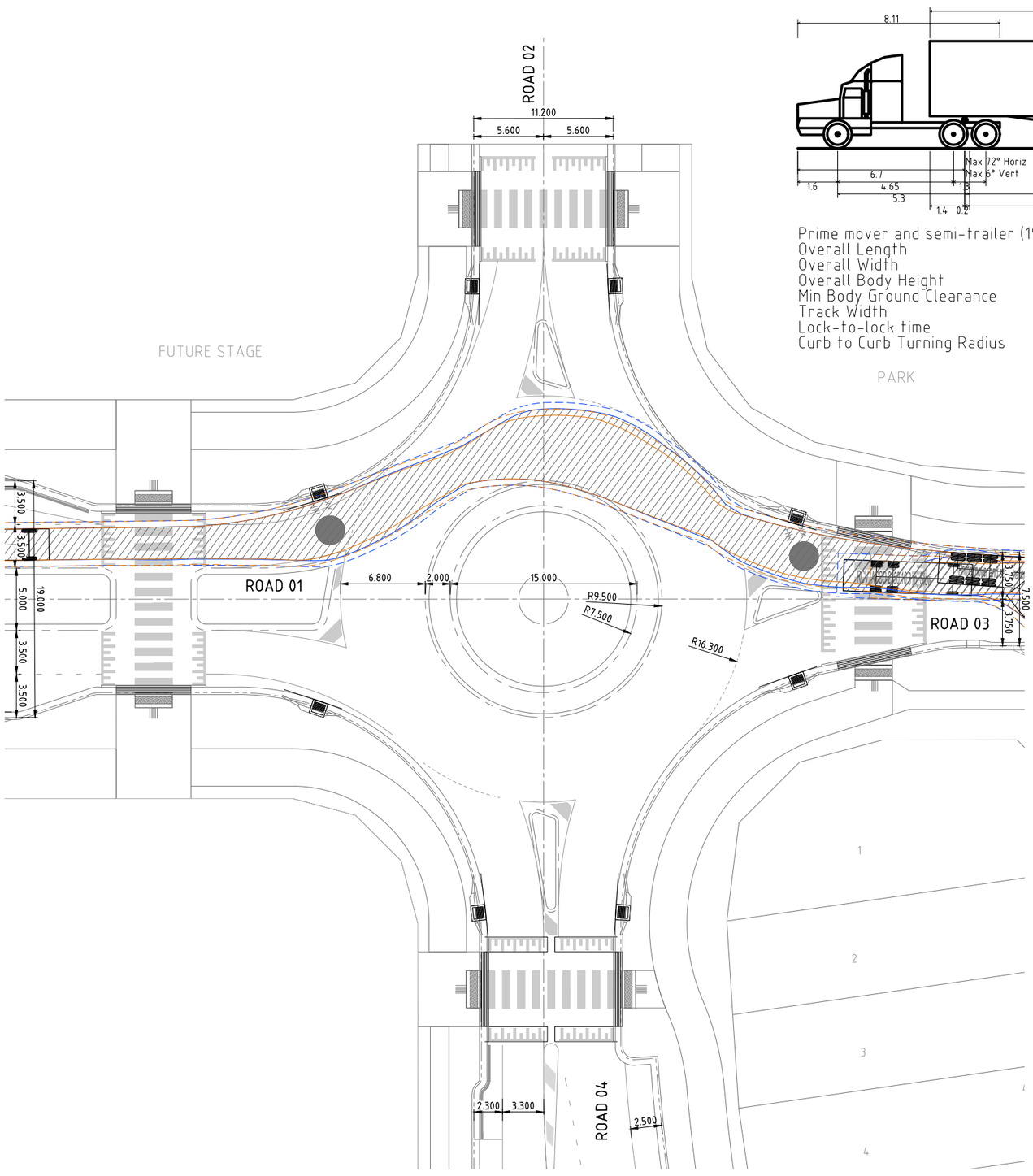
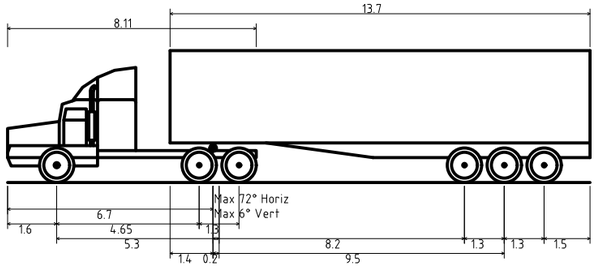


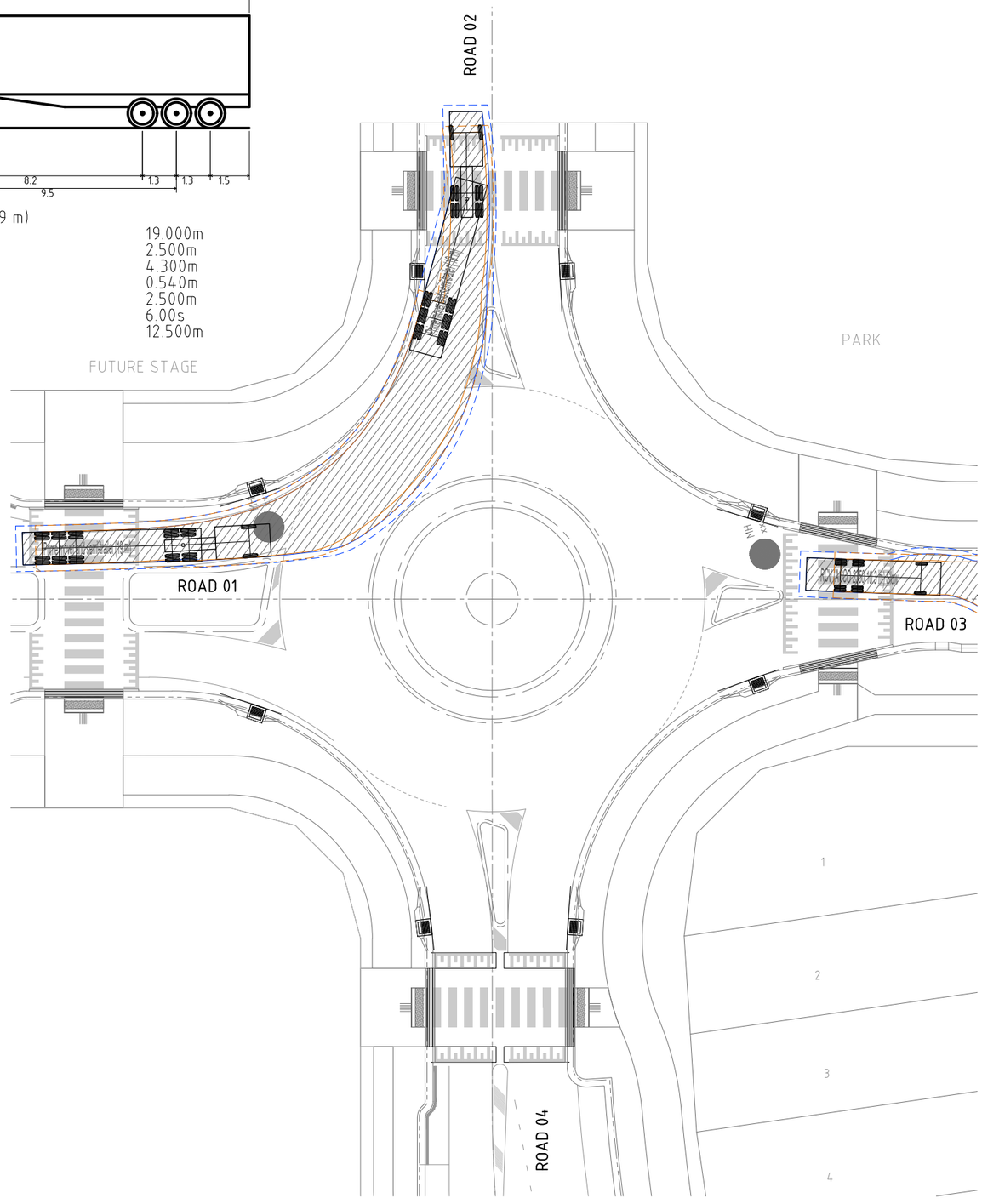


Prime mover and semi-trailer (19 m)

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

19m CHECK VEHICLE TURNING TEMPLATE - ROAD 01 to ROAD 03

SCALE 1:200



19m CHECK VEHICLE TURNING TEMPLATE - ROAD 01 to ROAD 02

SCALE 1:200

0 4 8 12 16 20m

4 3 2 1

SCALE 1:200 (A1) 1:400 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Ingerman

Registered Engineer

Date 19/6/2026

9424

Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: TURNING TEMPLATE
CHECK VEHICLE 19M SEMI TRUCK
SHEET 2 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CT06 | Rev C

Plot Date: 19/06/2026 12:22:47 PM
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User: ETHAN SCHAFER

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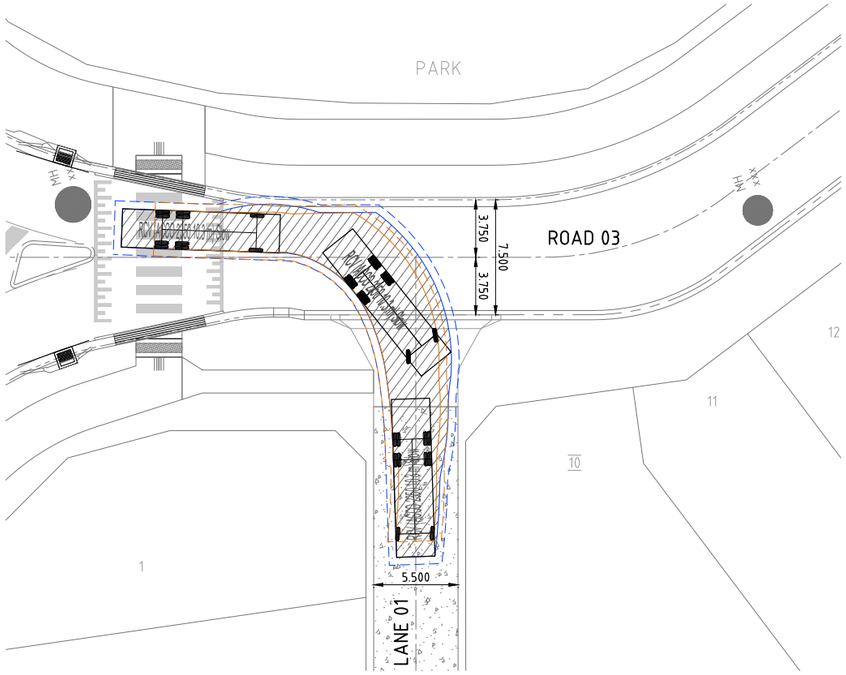
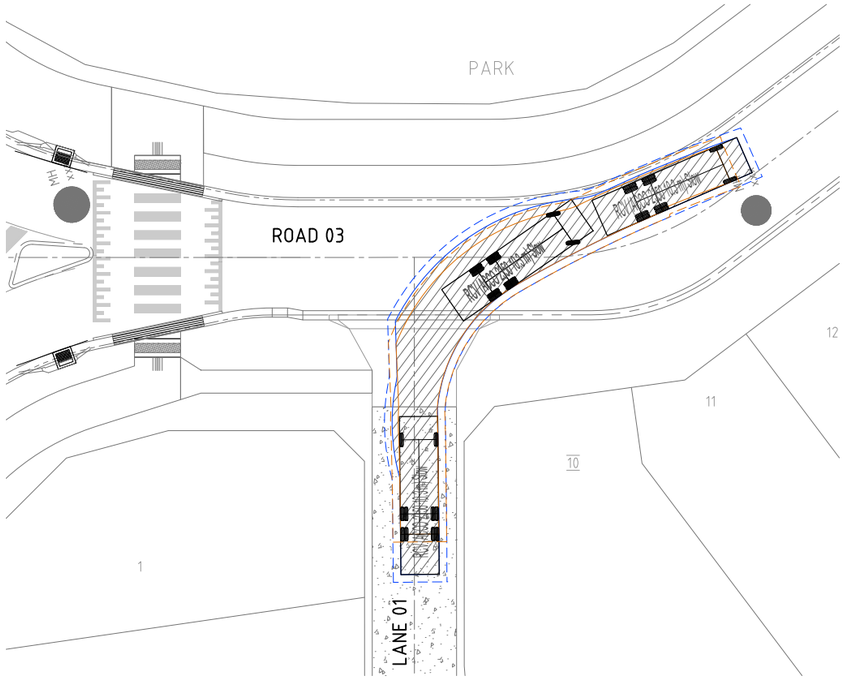


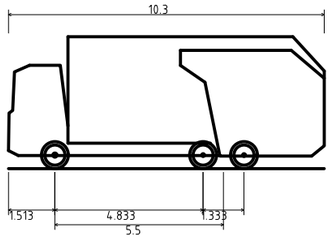
10.3m SERVICE VEHICLE TURNING TEMPLATE - ROAD 03 to LANE 01

SCALE 1:200



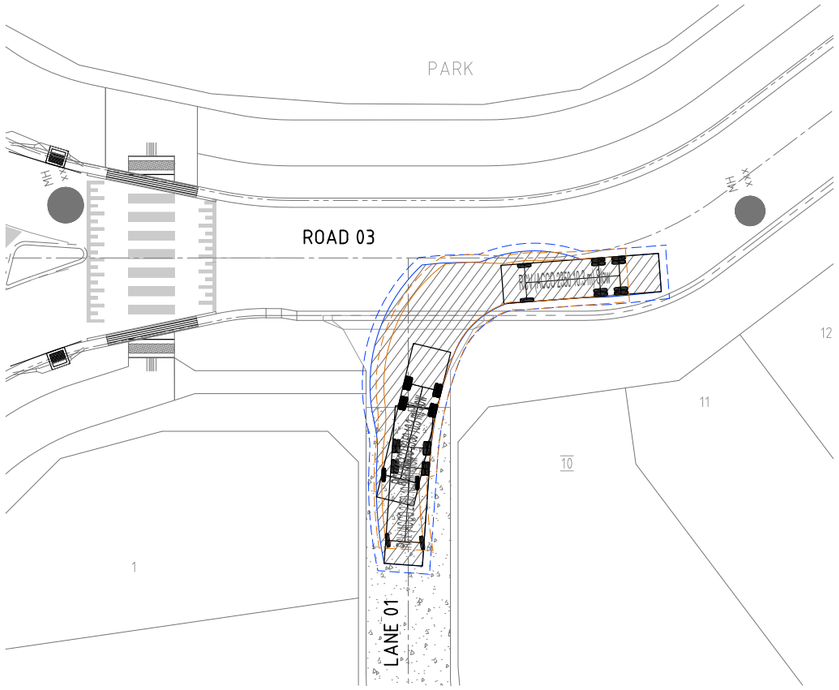
10.3m SERVICE VEHICLE TURNING TEMPLATE - LANE 01 to ROAD 03

SCALE 1:200



RCV (ACCO 2350 10.3 m) 5km/h R 9.757 kerb

Overall Length	10.300m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	9.757m



10.3m SERVICE VEHICLE TURNING TEMPLATE - ROAD 03 to LANE 01

SCALE 1:200

0 4 8 12 16 20m

4 3 2 1

SCALE 1:200 (A1) 1:400 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Ingerman

Registered Engineer

Date 19/6/2026

9424

Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: TURNING TEMPLATE
SERVICE VEHICLE 10.3M TRUCK
SHEET 1 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No.	Drawing No.	Rev
B00702	DA-CT07	C

Plot Date: 19/06/2026 12:22:52 PM User: ETHAN SCHAFER
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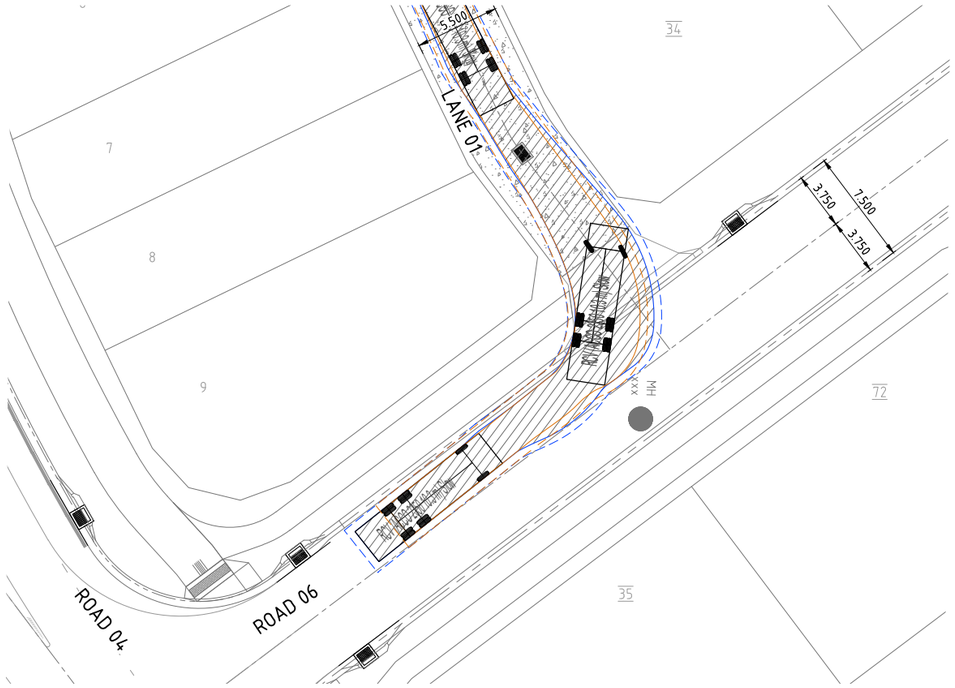
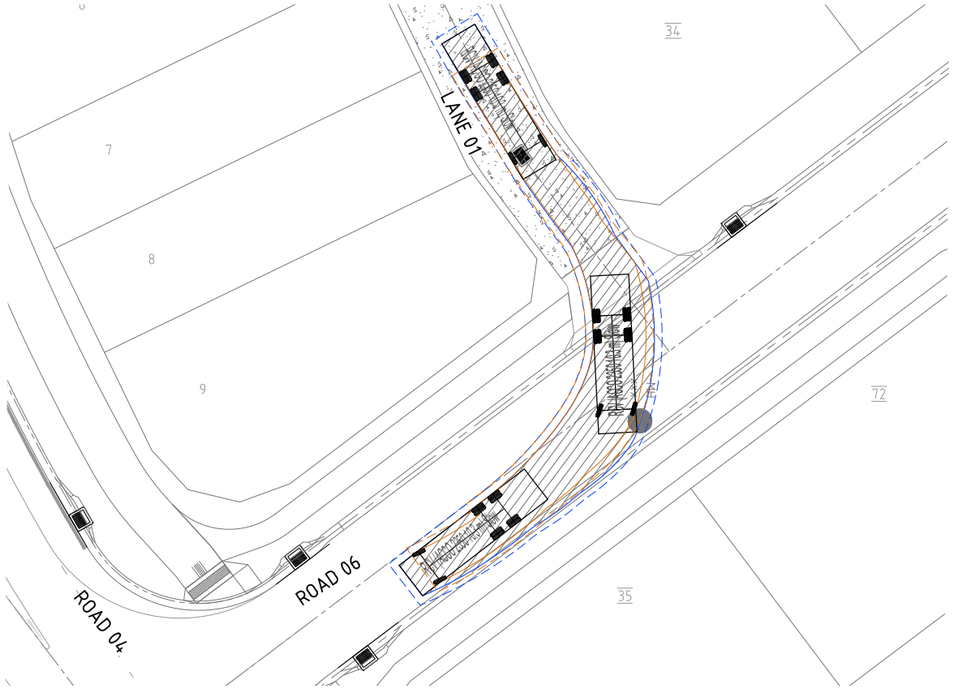
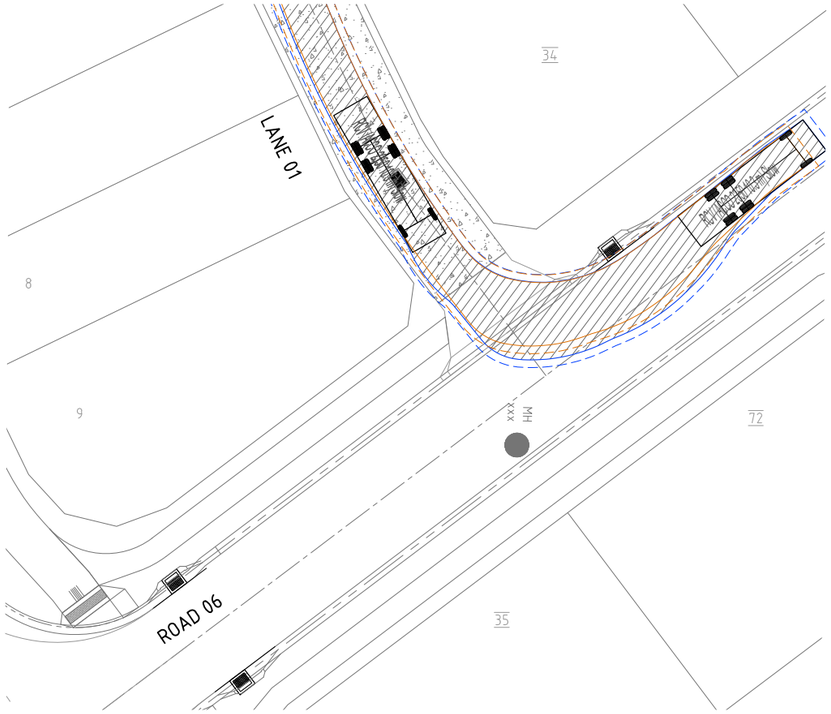


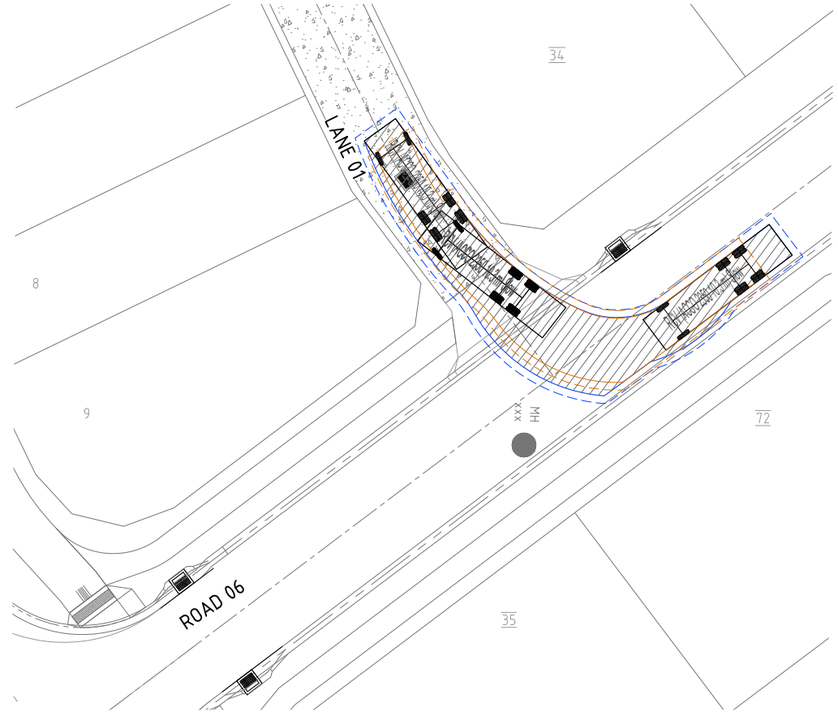
10.3m SERVICE VEHICLE TURNING TEMPLATE - ROAD 06 to LANE 01
SCALE 1:200



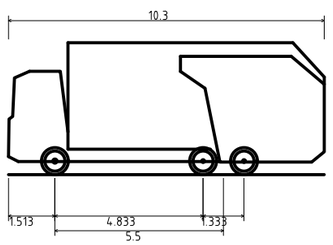
10.3m SERVICE VEHICLE TURNING TEMPLATE - LANE 01 to ROAD 06
SCALE 1:200



10.3m SERVICE VEHICLE TURNING TEMPLATE - LANE 01 to ROAD 06
SCALE 1:200



10.3m SERVICE VEHICLE TURNING TEMPLATE - ROAD 06 to LANE 01
SCALE 1:200



RCV (ACCO 2350 10.3 m) 5km/h R 9.757 kerb

Overall Length	10.300m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	9.757m

0 4 8 12 16 20m
4 3 2 1
SCALE 1:200 (A1) 1:400 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX
EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: TURNING TEMPLATE
SERVICE VEHICLE 10.3M TRUCK
SHEET 2 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702
Drawing No. DA-CT08
Rev C

Plot Date: 19/06/2026 12:22:59 PM
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User: ETHAN SCHAFER

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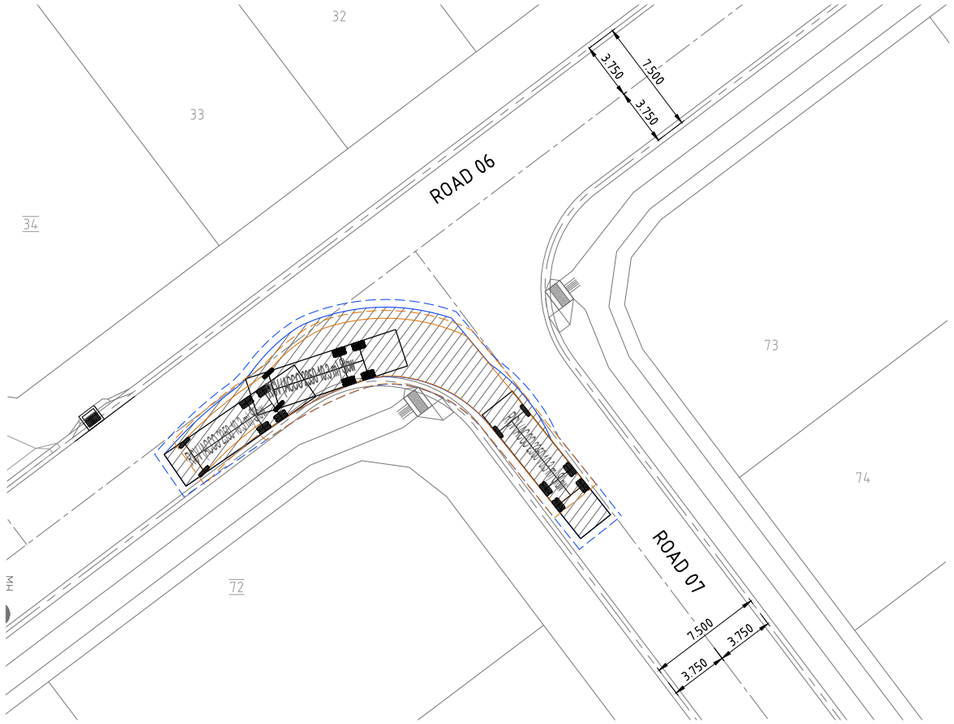
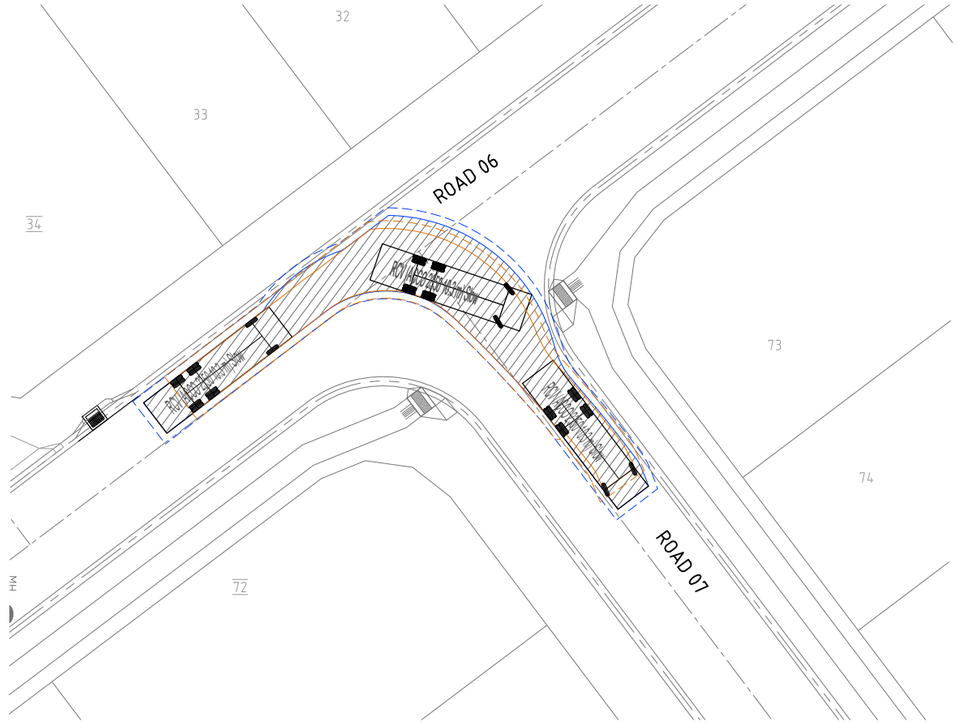


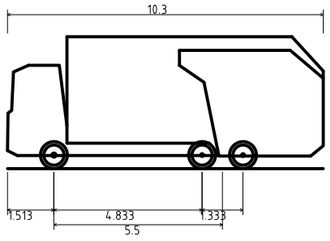
10.3m SERVICE VEHICLE TURNING TEMPLATE - ROAD 07 to ROAD 06

SCALE 1:200



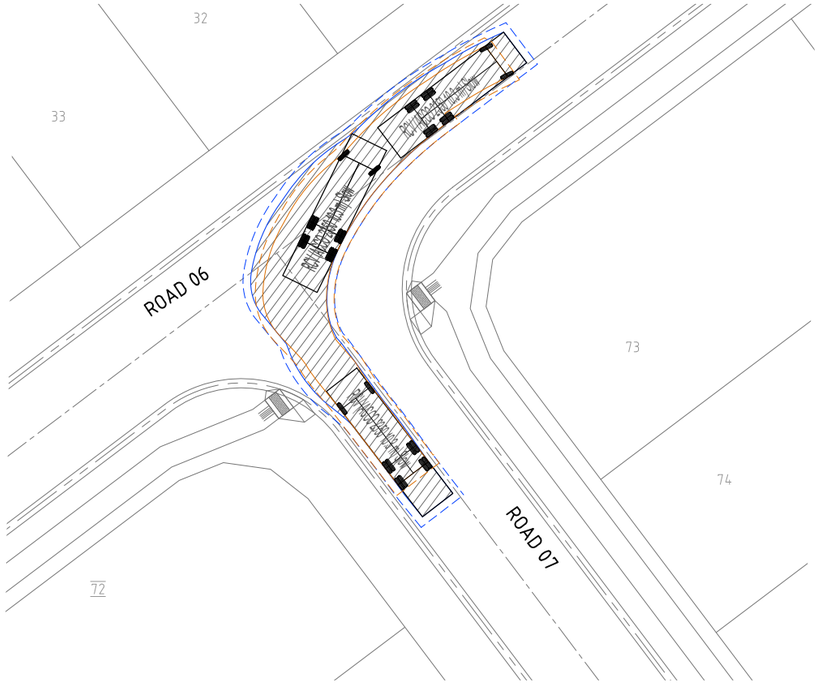
10.3m SERVICE VEHICLE TURNING TEMPLATE - ROAD 06 to ROAD 07

SCALE 1:200



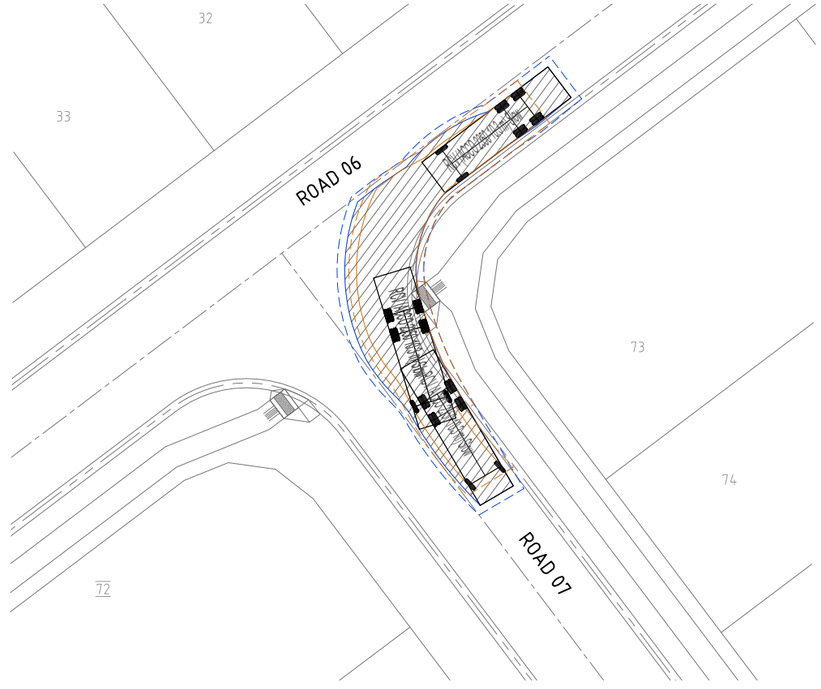
RCV (ACCO 2350 10.3 m) 5km/h R 9.757 kerb

Overall Length	10.300m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	9.757m



10.3m SERVICE VEHICLE TURNING TEMPLATE - ROAD 07 to ROAD 06

SCALE 1:200



10.3m SERVICE VEHICLE TURNING TEMPLATE - ROAD 06 to ROAD 07

SCALE 1:200

0 4 8 12 16 20m

4 3 2 1

SCALE 1:200 (A1) 1:400 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Inguiman

Registered Engineer

Date 19/6/2026

9424

Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: TURNING TEMPLATE
SERVICE VEHICLE 10.3M TRUCK
SHEET 3 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CT09 | Rev C

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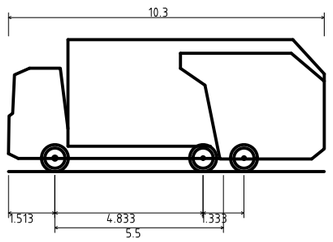
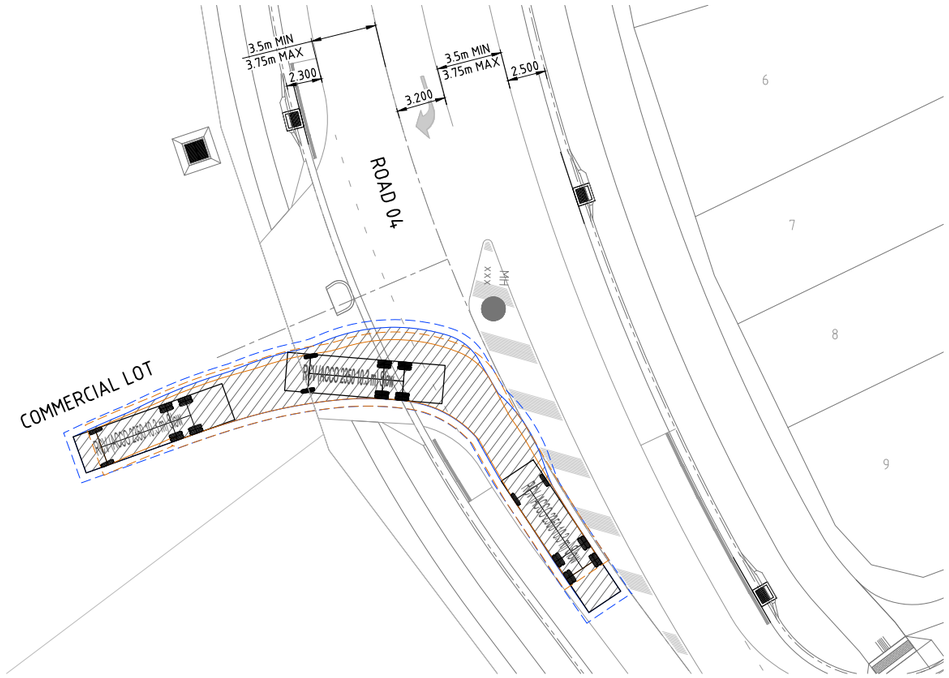


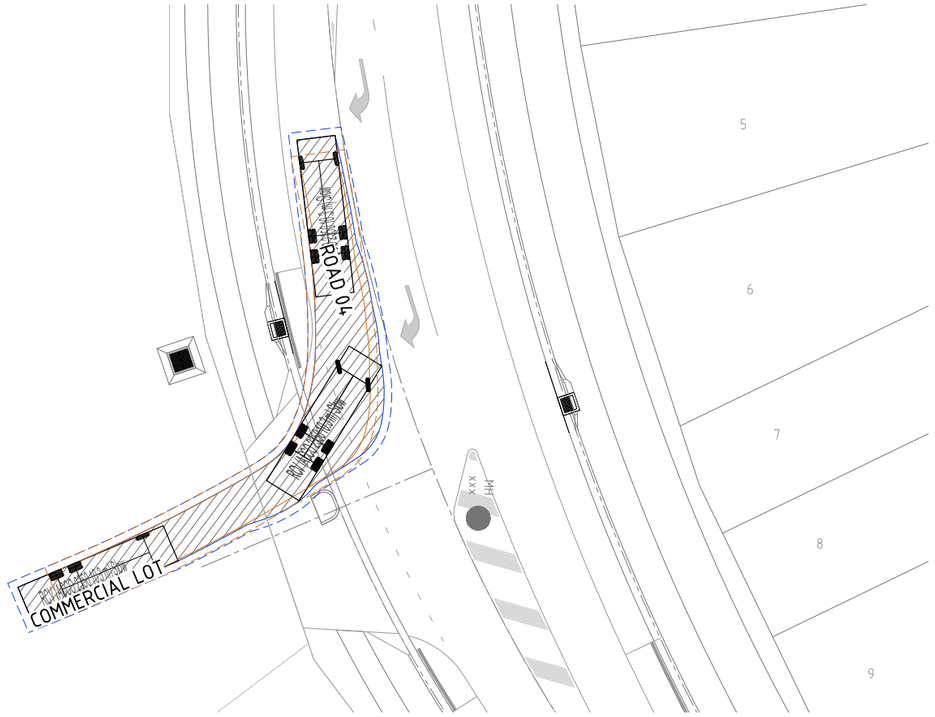
RCV (ACCO 2350 10.3 m) 5km/h R 9.757 kerb

Overall Length	10.300m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	9.757m



10.3m SERVICE VEHICLE TURNING TEMPLATE - ROAD 04 to COMMERCIAL DRIVEWAY

SCALE 1:200

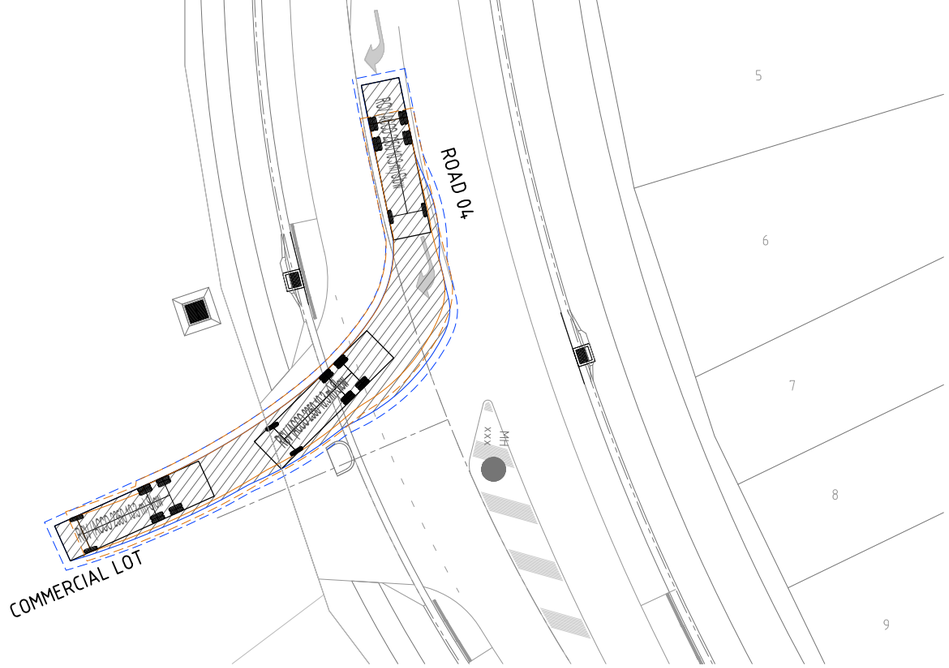


SCALE 1:200 (A1) 1:400 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

10.3m SERVICE VEHICLE TURNING TEMPLATE - ROAD 04 to COMMERCIAL DRIVEWAY

SCALE 1:200



10.3m SERVICE VEHICLE TURNING TEMPLATE - COMMERCIAL DRIVEWAY to ROAD 04

SCALE 1:200

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Ingerman

Registered Engineer

Date 19/6/2026

9424

Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: TURNING TEMPLATE
SERVICE VEHICLE 10.3M TRUCK
SHEET 4 OF 4

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

N

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CT10 | Rev C

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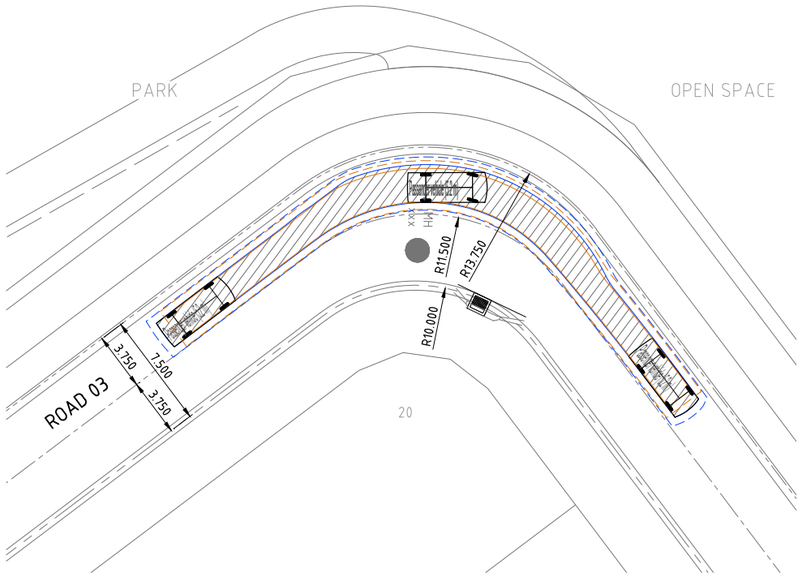
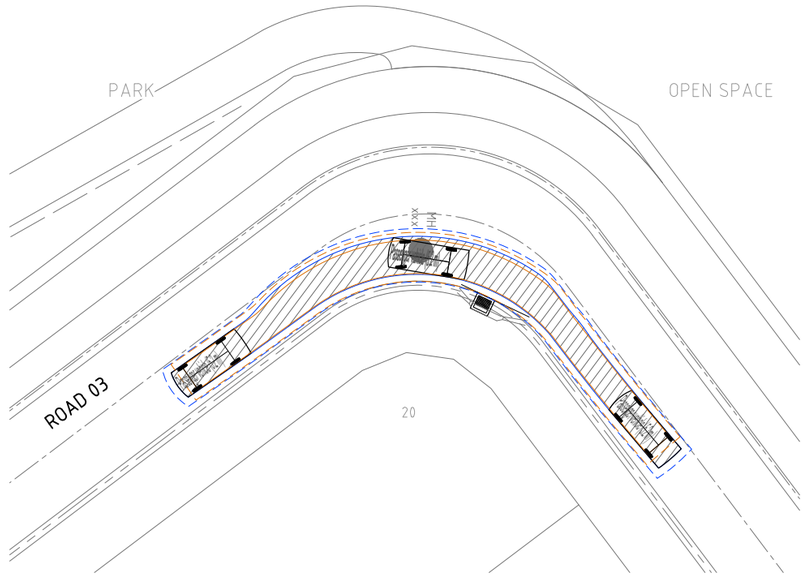


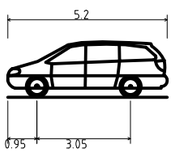
5.2m PASSENGER VEHICLE TURNING TEMPLATE - ROAD 03

SCALE 1:200



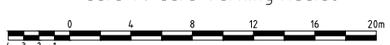
5.2m PASSENGER VEHICLE TURNING TEMPLATE - ROAD 03

SCALE 1:200



Passenger vehicle (5.2 m)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.804m
Min Body Ground Clearance	0.295m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.300m



SCALE 1:200 (A1) 1:400 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	PI	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PDW	PI	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PDW	PI	12/12/25

ENGINEERING CERTIFICATION

Peter Ingelman

Registered Engineer

Date 19/6/2026

9424

Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: TURNING TEMPLATE
DESIGN VEHICLE 5.2M CAR

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

N

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CT11 | Rev C

Plot Date: 19/06/2026 12:23:16 PM User: ETHAN SCHAFER
File Name: S:\126x\data\MANDSYN\B00702_24SH\4 CIVIL_DRGS\4.2 CURRENT\DA\B00702-DA-TURNING

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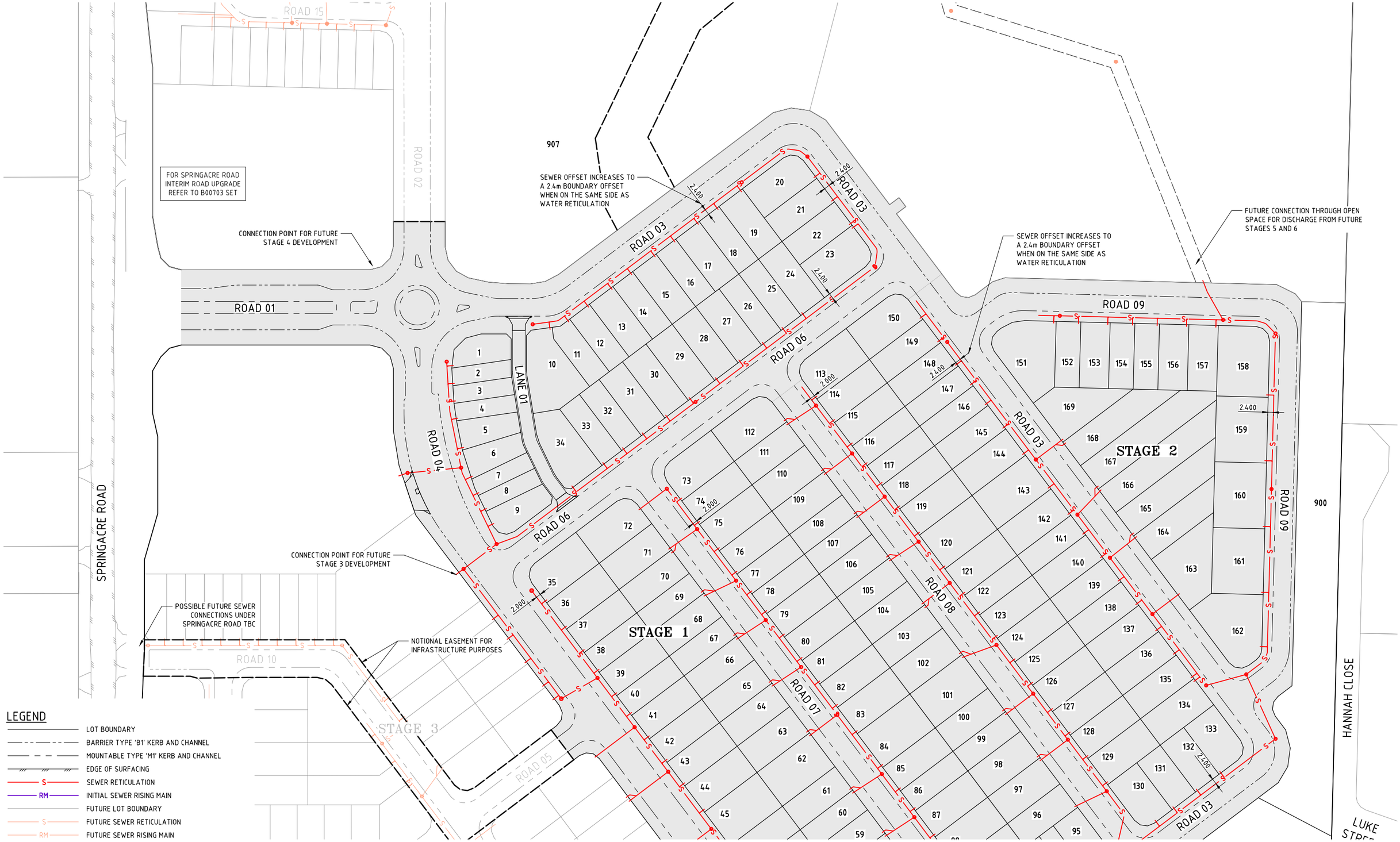

LEGEND

- LOT BOUNDARY
- BARRIER TYPE 'B1' KERB AND CHANNEL
- MOUNTABLE TYPE 'M1' KERB AND CHANNEL
- EDGE OF SURFACING
- S — SEWER RETICULATION
- RM — INITIAL SEWER RISING MAIN
- FUTURE LOT BOUNDARY
- S — FUTURE SEWER RETICULATION
- RM — FUTURE SEWER RISING MAIN

0 15 30 45 60 75m

15 11.25 7.5 3.75

SCALE 1:750 (A1) 1:1500 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

JOINS TO DRAWING No. B00702-DA-CS02

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	DH	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PI	DH	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PI	DH	12/12/25

ENGINEERING CERTIFICATION

Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: CONCEPT SEWER RETICULATION PLAN SHEET 1 OF 2

Datum: AHD PSM 79006 RL 67.474 (RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CS01 | Rev C

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User: ETHAN SCHAFER

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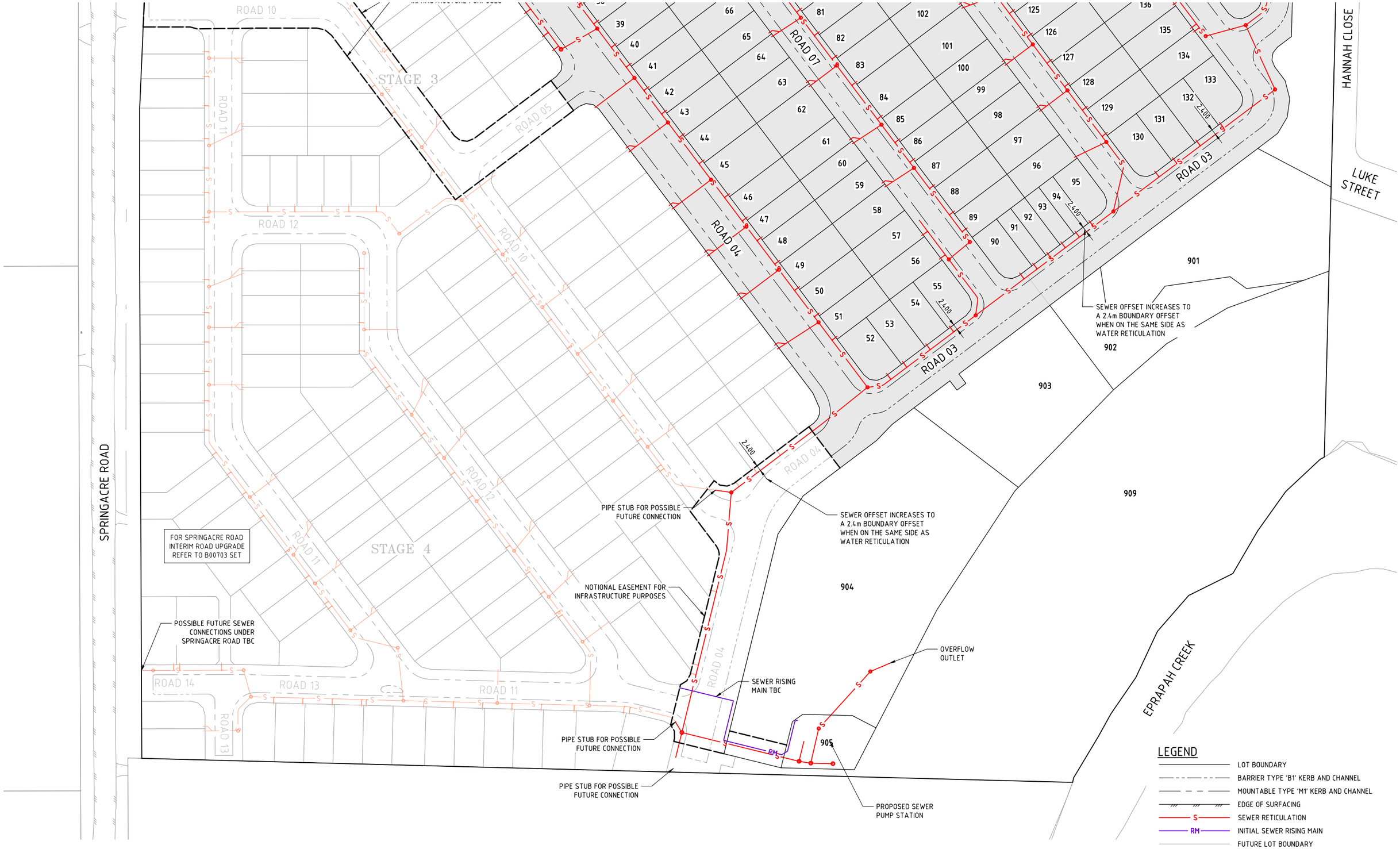
JOINS TO DRAWING No. B00702-DA-CS01



No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	DH	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PI	DH	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PI	DH	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: CONCEPT SEWER RETICULATION PLAN SHEET 2 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CS02 | Rev C

Plot Date: 19/06/2026 12:24:22 PM
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User: ETHAN SCHAFER

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JOINS TO DRAWING No. B00702-DA-CW02

0 15 30 45 60 75m
15 11.25 7.5 3.75
SCALE 1:750 (A1) 1:1500 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	DH	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PI	DH	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PI	DH	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX
EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: CONCEPT WATER RETICULATION PLAN SHEET 1 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702
Drawing No. DA-CW01
Rev C

Plot Date: 19/06/2026 12:24:52 PM
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JOINS TO DRAWING No. B00702-DA-CW01

ROAD 10
ROAD 11
ROAD 12
ROAD 05
ROAD 07
ROAD 04
ROAD 03
ROAD 10
ROAD 12
ROAD 11
ROAD 04
ROAD 14
ROAD 13
ROAD 11
ROAD 13
HANNAH CLOSE
SPRINGACRE ROAD
SPRINGACRE ROAD
STAGE 3
STAGE 4
901
902
903
904
905
909
EPRAPAH CREEK
Ø150 EXISTING AC WATER MAIN
NOTIONAL EASEMENT FOR INFRASTRUCTURE PURPOSES
POSSIBLE FUTURE CONNECTION TO ULTIMATE TRUNK MAIN
PROPOSED SEWER PUMP STATION
FOR SPRINGACRE ROAD INTERIM ROAD UPGRADE REFER TO B00703 SET

SCALE 1:750 (A1) 1:1500 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

LEGEND
- LOT BOUNDARY
- BARRIER TYPE 'B1' KERB AND CHANNEL
- MOUNTABLE TYPE 'M1' KERB AND CHANNEL
- EDGE OF SURFACING
- 100 WATER RETICULATION
- C C C WATER CONDUITS
- XX WATER METER
- FUTURE LOT BOUNDARY
- W FUTURE WATER RETICULATION
- C C C FUTURE WATER CONDUITS

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	DH	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PI	DH	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PI	DH	12/12/25

ENGINEERING CERTIFICATION
Peter Ingleman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX
EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: CONCEPT WATER RETICULATION PLAN SHEET 2 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

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Project No. B00702 | Drawing No. DA-CW02 | Rev C

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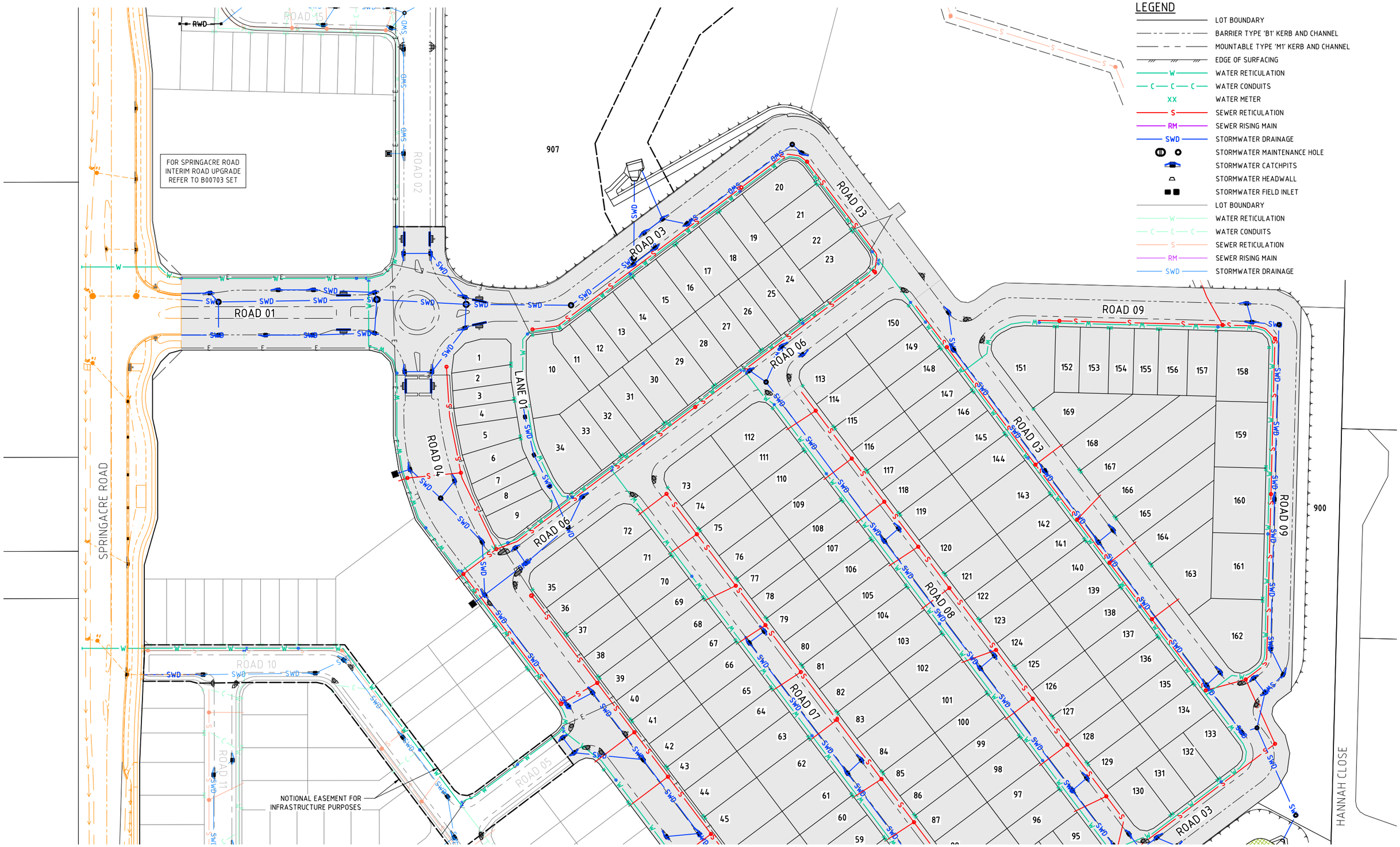

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	DH	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PI	DH	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PI	DH	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

URBEX

EMPOWER

Client URBEX PTY LTD

Project SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title COMBINED SERVICES PLAN
SHEET 1 OF 2

Datum AHD
PSM 79006
RL 67.474
(RCC) COORD

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Project No. B00702
Drawing No. DA-CM01
Rev C

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User: ETHAN SCHAFER

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JOINS TO DRAWING No. B00702-DA-CM01

LEGEND

- LOT BOUNDARY
- BARRIER TYPE 'B1' KERB AND CHANNEL
- MOUNTABLE TYPE 'M1' KERB AND CHANNEL
- EDGE OF SURFACING
- WATER RETICULATION
- WATER CONDUITS
- WATER METER
- SEWER RETICULATION
- SEWER RISING MAIN
- STORMWATER DRAINAGE
- STORMWATER MAINTENANCE HOLE
- STORMWATER CATCHPITS
- STORMWATER HEADWALL
- STORMWATER FIELD INLET

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	DH	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PI	DH	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PI	DH	12/12/25

ENGINEERING CERTIFICATION
Peter Engelman
Registered Engineer
Date 19/6/2026
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URBEX

EMPOWER

Client: URBEX PTY LTD

Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL

Title: COMBINED SERVICES PLAN
SHEET 2 OF 2

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702 | Drawing No. DA-CM02 | Rev C

Plot Date: 19/06/2026 12:25:43 PM
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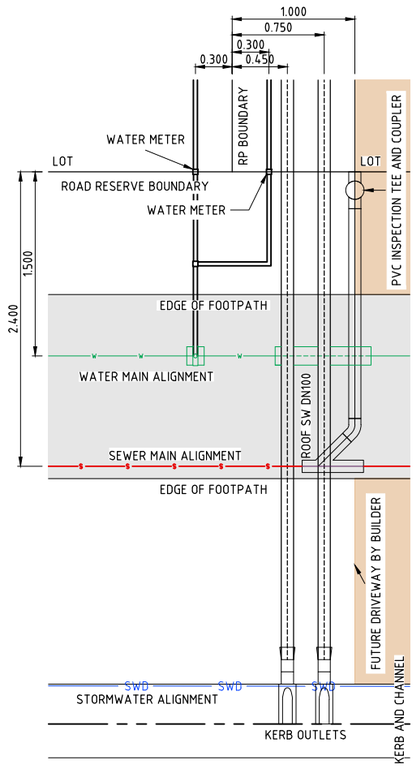
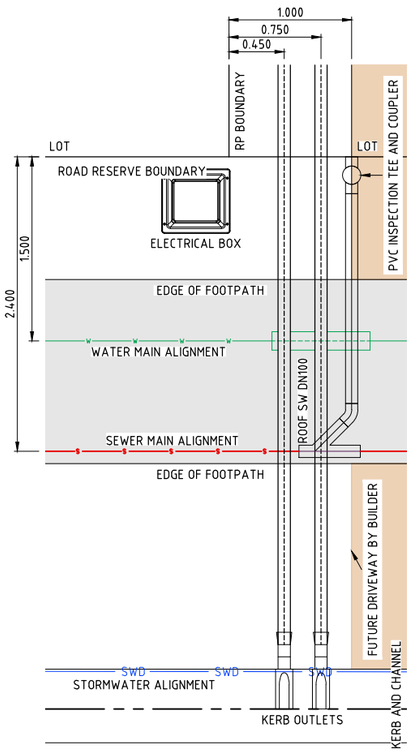
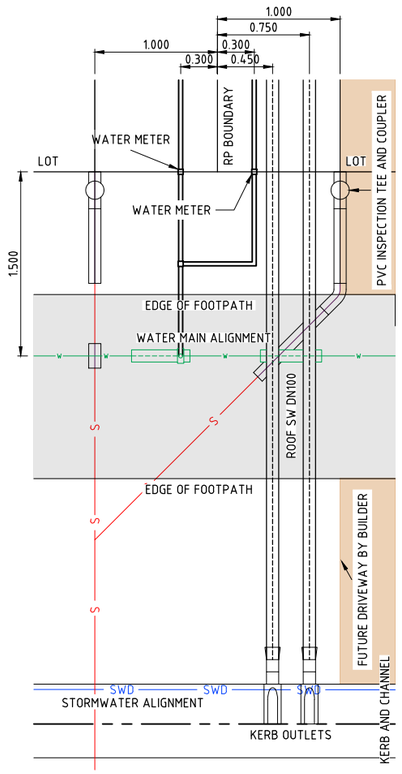


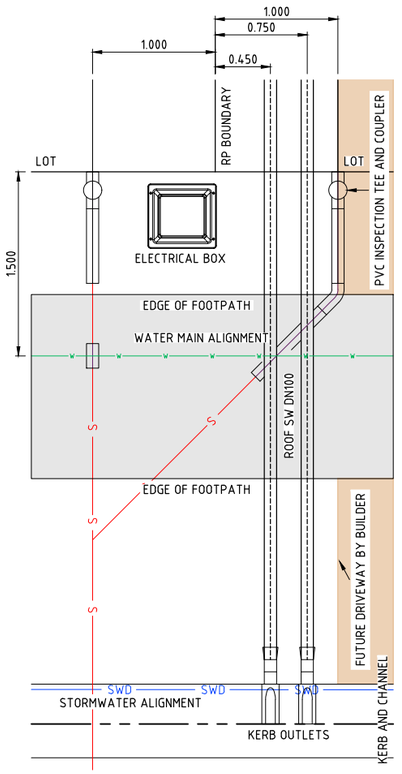
1 CM03 TYPICAL DETAIL
SCALE 1:25



2 CM03 TYPICAL DETAIL
SCALE 1:25



3 CM03 TYPICAL DETAIL
SCALE 1:25



4 CM03 TYPICAL DETAIL
SCALE 1:25

0 0.5 1 1.5 2 2.5m
0.5 0.25 0.375 0.125
SCALE 1:25 (A1) 1:50 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
C	MINOR AMENDMENTS	ES	PDW	PI	DH	19/06/26
B	MINOR AMENDMENTS INCLUDING STORMWATER BASIN AREAS AS PER EDQ CONDITIONS	ES	PDW	PI	DH	18/06/26
A	ORIGINAL ISSUE	ES	PDW	PI	DH	12/12/25

ENGINEERING CERTIFICATION
Peter Ingerman
Registered Engineer
Date 19/6/2026
9424
Registered Accreditation

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URBEX
EMPOWER

Client: URBEX PTY LTD
Project: SOUTHERN THORNLANDS PRECINCT 1 - ST 1 & 2 RAL
Title: COMBINED SERVICES PLAN
TYPICAL DETAILS - SHEET 1 OF 1

Datum: AHD
PSM 79006
RL 67.474
(RCC) COORD

NOT FOR CONSTRUCTION

Project No. B00702-DA-CM03
Drawing No.
Rev C

Plot Date: 19/06/2026 12:25:56 PM
User: ETHAN SCHAFER
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