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Design Report

Croskell PSP and ICP Transport Concept Design and Costs

Prepared for: Victorian Planning Authority (VPA)
16 July 2025
Client Reference No. D/23/2507

SMEC INTERNAL REF. 30043407

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1. Introduction

The Victorian Planning Authority (VPA) are currently developing a Precinct Structure Plan (PSP) and Infrastructure Contributions Plans (ICP) for Croskell (PSP 1051) in Bunurong Country, approximately 40 km southeast of Melbourne's CBD. The precinct is bounded by Thompsons Road to the north, Berwick Cranbourne Road to the east, and Narre Warren Cranbourne Road to the west.

The vision for Croskell is a regionally significant commercial precinct with more than 5,500 jobs, along with a mix of housing types, community facilities, drainage infrastructure, roads, pedestrian/bike paths and open space that builds on the character of the surrounding Cranbourne and Clyde community.

SMEC was commissioned by the VPA to develop the road infrastructure items of the Croskell PSP in September 2023. SMEC's scope involved the development of the following infrastructure items for the interim and ultimate cases, and preparation of cost estimates for the interim works for the following infrastructure projects:

- 1 x Road boulevard
- 6 x Intersections
- 2 x Pedestrian operated signals
- 2 x Shared Use Path *
- 3 x Culverts **

*The design drawings show SUP-01 and SUP-02, however SUP-02 was removed from the scope of the ICP and the costing has been removed for this item.
** The design drawings show CU-01, CU-02 and CU-03, however CU-03 was removed from the scope of the ICP and the costing has been removed for this item.

The following items were developed by Spiire and are included in concept drawings and costings:

- Casey Fields Boulevard: Victorian Desalination Project (VDP) assets crossing
- 2 x Shared Use Path: Victorian Desalination Project (VDP) assets crossing *

*The original number of Shared Use Paths developed by Spire to include was 3, however 1 was omitted from the ICP.

2. Project Scope

2.1 Road Projects

There is one proposed road project included within the PSP scope of works. Only an ultimate design is required for the road, since there is no interim arrangement for a connector boulevard. The designed form of the road layout is adopted from the template cross section layouts provided by the VPA.

The design of the road takes into consideration the following characteristics:

- The location of the existing road network
- Existing non-PSP property boundaries
- Land geometry and geotechnical constraints
- Waterway locations
- Proposed adjacent land use

2.2 Intersection Projects

There are 6 proposed intersection projects included within the scope of works. An interim and ultimate design is required for each intersection (except for IN-04 since Narre-Warren Cranbourne Road is assumed to be in its ultimate form with three lanes in each direction). The ultimate intersection layout will facilitate the location of

the proposed Right of Way (ROW) boundaries to ensure that enough land is reserved. The interim design is used as the basis for the ICP costing exercise. SMEC did not undertake any traffic analysis for this commission, the designed form of the intersection layouts is adopted from the benchmark intersection layouts and documents provided by the VPA and adjusted as required to fit the existing intersection arrangements.

The design of the intersections takes into consideration the following characteristics:

- The location of the existing road network
- Existing non-PSP property boundaries
- Land geometry and geotechnical constraints
- Waterway locations
- Proposed adjacent land use
- Minimise the redundant construction between interim and ultimate designs

2.3 Pedestrian Operated Signals

There are 2 proposed pedestrian operated signals projects, located on existing primary arterial roads. An interim and ultimate design is considered for PED-02. The ultimate intersection layout will ensure that enough land is reserved for the ultimate arrangement and the interim design is used as the basis for the ICP costing exercise. Only an ultimate design is required for PED-01 since Narre Warren – Cranbourne Road is assumed to be in its ultimate state with 3 lanes in each direction.

2.4 Shared User Path

There is 1 proposed shared use path project included within the scope of works. The design drawings show SUP-01 and SUP-02, however SUP-02 was removed from the scope of the ICP and the costing has been removed for this item.

The design of the shared user paths takes into consideration the following characteristics;

- Connectivity to the existing road network and proposed PSP road
- The location of Melbourne Water underground assets
- Land geometry and geotechnical constraints
- Waterway locations
- Proposed adjacent land use

2.5 Culverts

The scope includes 2 new culvert projects which comprise of 2 shared use path culvert crossings. The design drawings show CU-01, CU-02 and CU-03, however CU-03 was removed from the scope of the ICP and the costing has been removed for this item. All culvert projects are over Melbourne Water DSS waterways. The designed form of the culvert layouts are adopted from the VPA benchmark items and cross section of the waterways.

2.6 Victorian Desalination Project (VDP) Asset Crossings

There are 3 proposed VDP asset crossings within the PSP scope of works which comprise 1 road crossing and 2 shared use path crossings. Design of the VDP asset crossings and costings were prepared by Spiire and have been included in the overall concept designs and costings.

*The original number of Shared Use Path crossings developed by Spire to include was 3, however 1 was omitted from the ICP.

3. Design Criteria and Methodology

3.1 Design Documents/Standards

The following design documents were adhered to throughout the development of the project concept designs.

- VPA Benchmark Infrastructure Costings Report for Infrastructure in Growth Areas December 2019
- VPA Benchmark Infrastructure Cost Guide October 2019
- VicRoads Guidance for Planning Road Networks in Growth Areas November 2015
- VicRoads Road Design Note RDN 04-01, Heavy Vehicle Network Access Considerations July 2019
- VicRoads supplement to the Austroads Guide to Road Design
- VicRoads Traffic Engineering Manual
- Austroads Guide to Road Design
- Australian Standards
- Rawlinsons Australian Construction Handbook January 2023

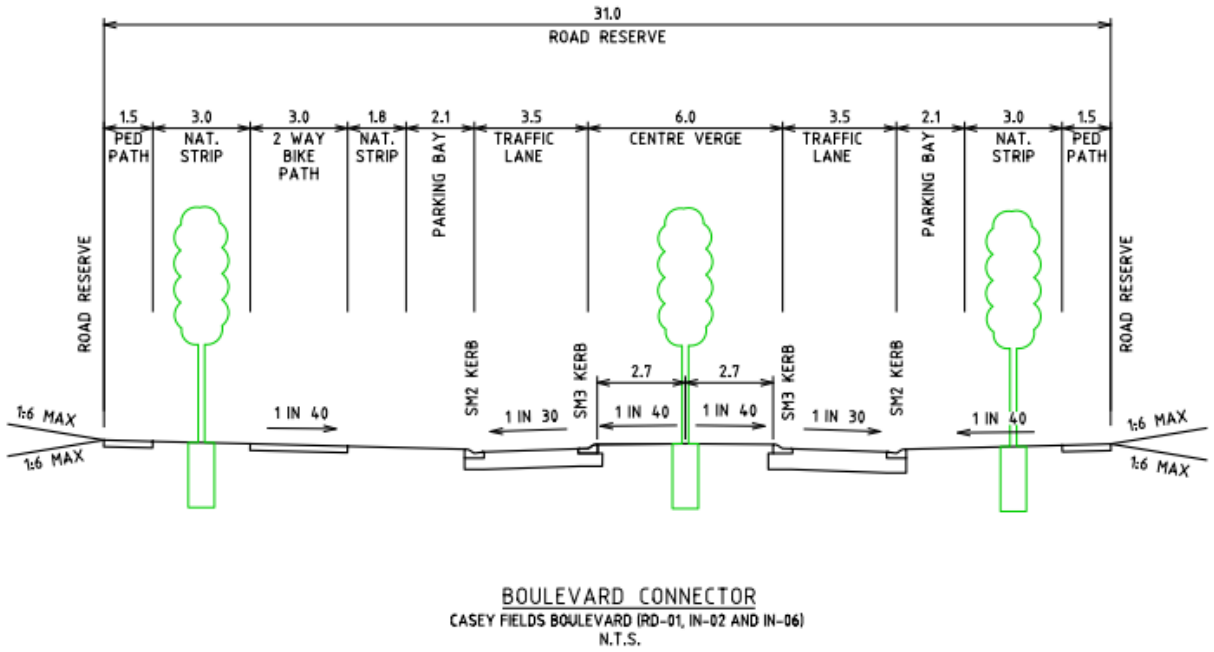
3.2 Design Methodology

Existing arterial road drawings have been provided by Department of Transport and Planning (DTP), Major Road Projects Victoria (MRPV) and City of Casey (Council).

PSP concept drawings have been prepared on an aerial base, with DTP/MRPV/Council designs overlaid, as the basis for interim and ultimate designs. The ultimate layout will facilitate the location of the proposed ROW boundaries to ensure enough land is reserved. The interim design is used as the basis for the ICP costing exercise.

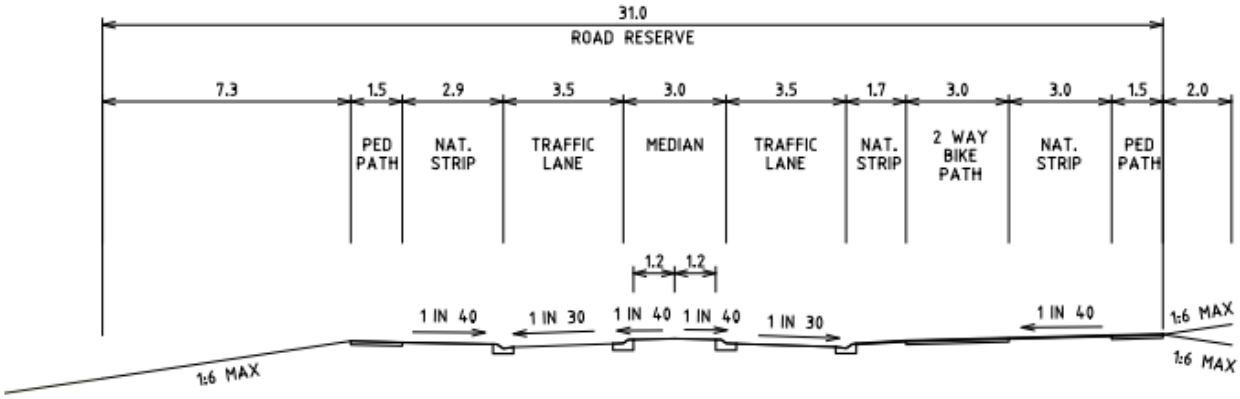
3.3 Typical Cross Sections

Typical cross sections used in the road and intersection projects are shown in Figures 1-3.



BOULEVARD CONNECTOR
CASEY FIELDS BOULEVARD (RD-01, IN-02 AND IN-06)
N.T.S.

Figure 1: Cross-section Connector Boulevard - 31m Road Reserve



BOULEVARD CONNECTOR - REDUCED 23.75m ROAD WIDTH - 31m ROAD RESERVE
CASEY FIELDS BOULEVARD
REDUCED SECTION. TRANSMISSION EASEMENT
AND VDP CABLE SPECIAL USE OVERLAY

Figure 2: Cross-section Connector Boulevard– Reduced 23.75m Road Width

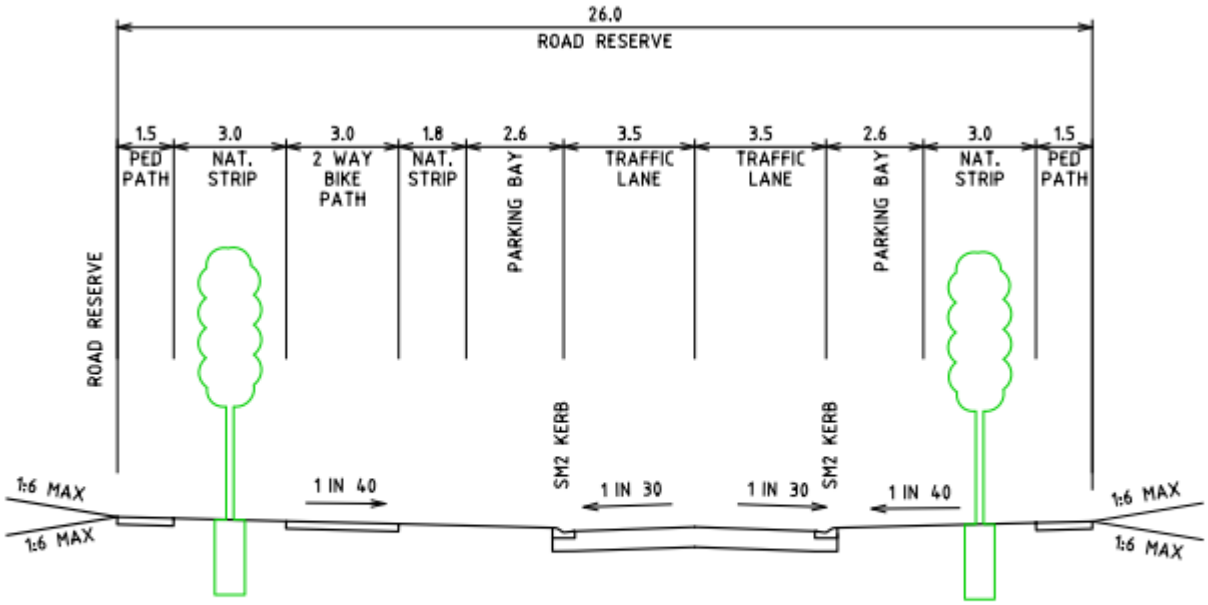


Figure 3: Cross-section Industrial Connector – 26m Road Reserve

3.4 Road Projects

Details of the Casey Fields Boulevard (RD-01) road project are shown in Table 1.

Table 1 – Road Projects

Project No.	Name	Classification	Road reserve width	Design speed	Road Length (PSP section)	Benchmark Infrastructure Report Item No.
RD-01	Casey Fields Boulevard	Connector Boulevard	31 m	50 km/h	905m	Item 3

Only an ultimate design is required for the RD-01, since there is no interim arrangement for a connector boulevard. The alignment of the RD-01 was designed to fit within existing property boundaries and to align with crossings over the Melbourne Water DSS waterways and VDP assets. The road reserve narrows from 31 m to 23.75m at the culvert crossing and VDP asset crossing, allowing the width of the crossings to be minimised.

The road crossing of VDP assets includes a thermal backfill treatment. The design of this treatments was prepared by Spiire and is included in the concept design drawings and sections.

3.5 Intersection Projects

Table 2 – Intersection Projects

Project No.	Location	Proposed Works	Classification	Design Vehicle	Check Vehicle	Benchmark Infrastructure Report Item No.
IN-01	Thompsons Road/Future Bray Blvd & Industrial Connector	Retrofit Industrial Connector leg into existing T Intersection to create a Signalised Cross Intersection	Primary Arterial (Principal Freight Network route) / Connector Boulevard	19 m prime mover and semi-trailer	26 m B-double	Item 7
IN-02	Thompsons Road & William Thwaites Blvd & Casey Fields Boulevard	Retrofit Connector Boulevard leg into existing T Intersection to create a Signalised Cross Intersection	Primary Arterial (Principal Freight Network route) / Connector Boulevard	19 m prime mover and semi-trailer	26 m B-double	Item 7
IN-03	Thompsons Road & Wheelers Park Dr & Industrial Connector	Retrofit Industrial Connector leg into existing T Intersection to create a Signalised Cross Intersection	Primary Arterial (Principal Freight Network route) / Connector Boulevard	19 m prime mover and semi-trailer	26 m B-double	Item 7
IN-04	Narre-Warren Cranbourne Road & Industrial Connector & Majestic Boulevard	Retrofit Industrial Connector leg into existing T Intersection to create a Signalised Cross Intersection	Primary Arterial / Connector Boulevard	12.5 m single unit truck / bus	19 m prime mover and semi-trailer	Item 7
IN-05	Berwick Cranbourne Road & Industrial Connector & Hamersley Drive	Retrofit Industrial Connector leg into planned T Intersection upgrade to create a Signalised Cross Intersection	Primary Arterial / Connector Boulevard	12.5 m single unit truck / bus	19 m prime mover and semi-trailer	Item 7
IN-06	Casey Fields Boulevard & Linsell Boulevard.	Retrofit Connector Boulevard leg into existing T Intersection to create a Signalized Cross Intersection	Secondary Arterial / Connector Boulevard	12.5 m single unit truck / bus	19 m prime mover and semi-trailer	Item 9

The development of each intersection has been adjusted to suit the local context and generally accord with VPA typical intersection typologies. This includes the provision for turn lanes and lengths.

Provisions have been made for pedestrian movements at each intersection as appropriate with median refuges provided. Median refuges are a minimum of 2.5 m wide, except at IN-03 where 2.07 m median width is provided for the ultimate design due to the existing median width. The skew of pedestrian cross walks are no greater than 15 degrees from the perpendicular.

Raised priority crossings are shown on the drawings to indicate pedestrian and cyclist priority. Alternative methods of priority can be investigated through the detailed design process.

The interim intersection designs have generally been developed to minimise the amount of redundant works when the intersection is upgraded to its ultimate configuration.

Design vehicles for the intersections are listed in Table 2 for each intersection. Design vehicle swept paths provide a minimum clearance offset from the extremities of the vehicle path to a kerb, pavement edge or centreline as detailed in Austroads GRD Part 4 and Part 4A.

Where double right hand turns in the same direction are required at an intersection, a design vehicle will turn from the left-hand right turn lane and a car will turn from the right-hand right turn lane, with 1 m clearance between the two vehicles as per Austroads GRD Part 4.

3.6 Pedestrian Operated Signals

Pedestrian operated signals PED-01 and PED-02 are designed to align with a future east-west shared user path and are designed with a stagger in accordance with Austroads GRD Part 4.

PED-01 is located north of the beginning of the southbound right turn lane. The detailed design of PED-01 will need to consider the height of the overhead transmission lines.

Table 3 - Pedestrian Operated Signal Projects

Project No.	Location	Proposed Works
PED-01	Narre Warren Cranbourne Road	Mid-block Signalised Pedestrian Crossing.
PED-02	Berwick Cranbourne Road.	Mid-block Signalised Pedestrian Crossing

3.7 Shared User Paths

Details of the shared use path projects are listed in Table 4.

Table 4 – Shared User Path Projects

Project No.	Location	SUP width	SUP length	Benchmark Infrastructure Report Item No.
SUP-01	Melbourne Water Pipe Track	3 m	1104 m	N/A
SUP-03	VDP asset crossing	3 m	15 m	N/A
SUP-04	VDP asset crossing	3 m	15 m	N/A

Alignment of shared use path SUP-01 (Melbourne Water Pipe Track) is designed along the Melbourne Water assets corridor and provides a south-west to north-east connection through the Croksell PSP. SUP-01 connects to RD-01 near the road culvert crossing (CU-01) to avoid additional waterway and VDP crossings for SUP-01.

Shared use path projects SUP-03 and SUP-04 are VDP asset crossings for future shared use paths. Designs for these treatments were developed by Spiire and locations are show on the key plan (drawing no. 2001).

Designs were previously prepared for SUP-02 and SUP-05 that were subsequently removed from the ICP.

3.8 Culverts

Details for culvert projects are listed in Table 5.

Table 5 – Culvert Projects

Project No.	Location	Culvert length	Culvert width	Culvert Size	Culvert Quantity	Benchmark Infrastructure Report Item No.
CU-01	RD-01	Varies (31.72m - 34.16m)	27 m	1800 x 3000	68 No. box culverts 55 No. link slabs	Item 28
CU-02	SUP-01	7.32 m	5.4 m	1800 x 3000	6 No. box culverts 3 No. link slabs	Item 28

The culvert projects have been designed based on the VPA infrastructure benchmark item 28 and adapted to the width and cross-sectional area of the proposed DSS waterways provided by Melbourne Water.

The road culvert crossing includes allowance for roadside safety barriers and shared user path culvert crossings include allowance for cyclist friendly safety fencing.

A design was previously prepared for CU-03 that was subsequently removed from the ICP.

3.9 Cost Estimates

The interim design is used as the basis for the costing. Costs estimates have been prepared based on rates from the benchmark rates from the VPA Benchmark Infrastructure Costings Report (2019) using P90 rates where available. Costs were indexed in accordance with the VPA Benchmark Infrastructure Cost Guide. The 2025/26 index rate of 1.32 has been adopted. Items not covered by a VPA benchmark rate have used Rawlinsons Australian Construction Handbook January 2023 with a cost base of December 2022 based on the available information at the time of initial cost estimate. The cost items have then been indexed based on the construction industry CPI. Based on March 2025 this provides an indexation rate of 1.06 for these items. Estimates were received from Spiire relating to the VDP crossings were adopted and provided with no multiple as they were current when supplied to SMEC. Finally adjustments were made based on panel review comments received on the ICP. These values are provided with no multiple as they were current at the time of the review comment.

Cost estimates are provided to the Victorian Planning Authority for budgeting purposes only for the Infrastructure Contributions Plan. SMEC Australia assumes no liability for losses incurred through changes to the quantities required construct the projects or increases in construction costs. These values are not intended for use in construction and do not constitute a bill of quantities.

3.9.1 Non-standard benchmark cost items

Traffic management costs for intersection projects IN-01 to IN-05 were increased to 10% (from VPA benchmark rate 5%) due to the increased traffic management required for existing arterial roads. An allowance of $30,000 was included for each of intersection projects IN-01 to IN-06 for protection of existing utility services. VDP asset crossing cost items were prepared by Spiire.

The following non-standard items were included in the cost estimates were based on rates from the Rawlinsons Australian Construction Handbook January 2023:

- Raised priority crossing asphalt rate based on “Hot bituminous concrete including tack coat”
- Raised priority crossing surface treatment rate based on “Thermoplastic marking of bitumen paving”

- Demolition of existing concrete kerbs, footpath, islands rate based on “Break up and remove reinforced concrete in open excavations”
- De-watering of dams rate based on “Dewatering - deep system (to reduce water level by over 1000mm)”
- Pedestrian fencing rate based on “1200mm high fence of galvanised welded mesh roll top panels and tubular posts”
- Cycle friendly safety fencing rate based on “Bridge balustrade”

3.9.2 Exclusions from the cost estimates

No allowance has been included for:

- Utility relocation works (an allowance for protection of existing utilities for intersections projects is provided)
- Geotechnical testing
- Water Sensitive Urban Design (WSUD)

Appendix A Concept Drawings

SUP-02 AND CU-03 WERE REMOVED FROM THE ICP ON RECOMMENDATION FROM THE DRAFT CASEY AMENDMENT C296CASE REFERRAL 11 - CROSKELL (EMPLOYMENT) PRECINCT STRUCTURE PLAN AND INFRASTRUCTURE CONTRIBUTIONS PLAN VPA PROJECTS STANDING ADVISORY COMMITTEE REPORT MAY 2025.

N

BRAY BLVD (FUTURE)

WILLIAM THWAITES BLVD

WHEELERS PARK DR

BERWICK CRANBOURNE RD

THOMPSONS RD

THOMPSONS RD

SUP-02

CU-03

IN-01

IN-02

IN-03

CU-02

MAJESTIC BLVD

IN-04

SUP-04 (VDP CROSSING REFER TO DWG 5014)

IN-05

HAMERSLEY DR

SUP-03 (VDP CROSSING REFER TO DWG 5014)

EXTENT OF SPECIAL OVERLAY ZONE FOR VDP CABLE

CU-01

PED-02

ARCHAEOLOGICALLY SENSITIVE AREA

PED-01

SUP-01

RD-01

NARRE WARREN - CRANBOURNE RD

LINSELL BLVD

LINSELL BLVD

BERWICK CRANBOURNE RD

LINSELL BLVD

IN-06

FINAL

ISSUE	APP'D	DATE	AMENDMENT
F	GC	30.01.25	CHANGES BASED ON LAND TAKE FEEDBACK
D	JM	26.08.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	01.05.24	FINAL CONCEPT DESIGN
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

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PROJ:
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Victorian Planning Authority

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VICTORIAN PLANNING AUTHORITY

PSP KEY PLAN

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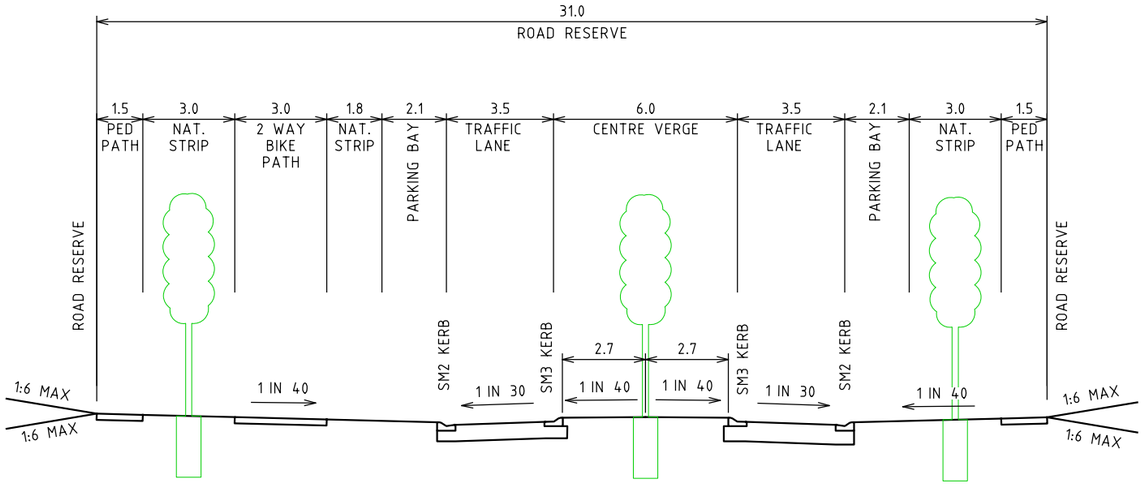
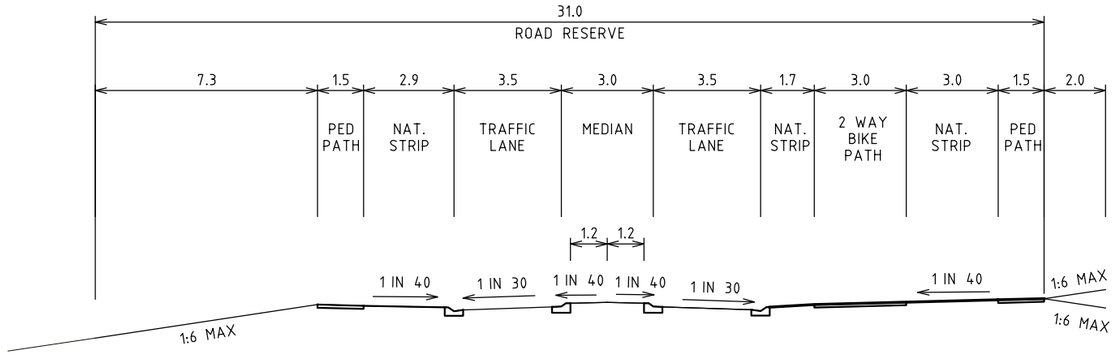


BOULEVARD CONNECTOR

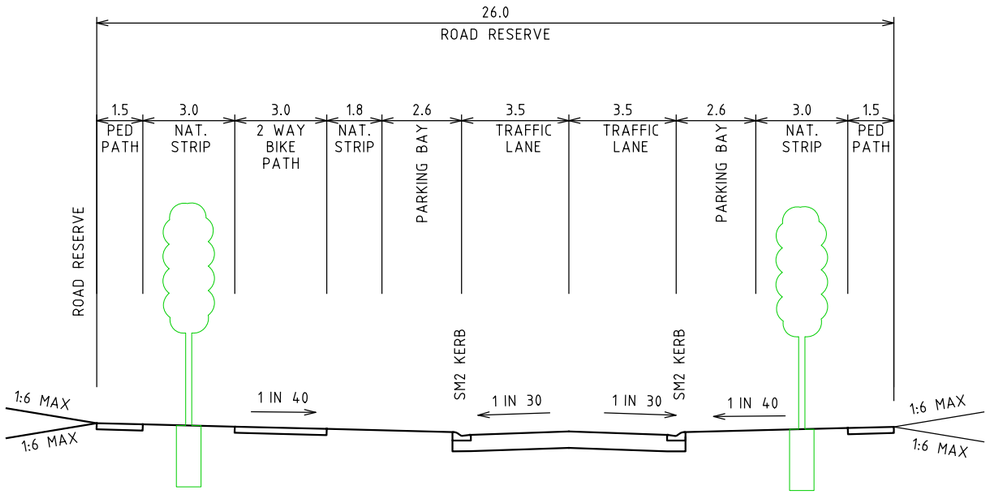
CASEY FIELDS BOULEVARD (RD-01, IN-02 AND IN-06)
N.T.S.



BOULEVARD CONNECTOR - REDUCED 23.75m ROAD WIDTH - 31m ROAD RESERVE

CASEY FIELDS BOULEVARD

REDUCED SECTION. TRANSMISSION EASEMENT
AND VDP CABLE SPECIAL USE OVERLAY



INDUSTRIAL CONNECTOR

ALL PROPOSED PSP ROADS EXCEPT CASEY FIELDS
BOULEVARD (IN-01, IN-03, IN-04, IN-05)
N.T.S

GENERAL NOTES:

1. PROPOSED ROW BOUNDARY BASED ON TYPICAL CROSS SECTION AND TYPICAL INTERSECTION WIDTHS.
2. ROAD CROSS SECTIONS HAVE BEEN ADOPTED FROM THE VPA TYPICAL CROSS SECTIONS.
3. THE CO-ORDINATE SYSTEM USED IN ALL DRAWINGS IS MGA2020 (ZONE 55).
4. NO ASSESSMENT OF EXISTING OR PLANNED UTILITY SERVICES HAS BEEN UNDERTAKEN IN THE DEVELOPMENT OF THE INTERSECTIONS.
5. LINEMARKING IS INDICATIVE AND REPRESENTATIVE OF THE FUNCTIONALITY OF THE INTERSECTION ONLY.
6. ALL LANE WIDTHS ARE 3.5m UNLESS STATED OTHERWISE.

LEGEND:

- INTERIM LAYOUT
- ULTIMATE LAYOUT
- WORKS BY OTHERS
- EXISTING CONDITIONS
- PROPOSED ROW BOUNDARY
- EXISTING ROW BOUNDARY
- CADASTRAL BOUNDARY
- MELBOURNE WATER DSS ASSETS
- MELBOURNE WATER ASSETS
- ABANDONED MELBOURNE WATER ASSETS
- VDP OPTIC FIBRE CABLE
- VDP 220 KV ELECTRIC CABLE
- 500 KV OVERHEAD TRANSMISSION LINES
- EXISTING ASSETS TO BE REMOVED
- EXTENT OF EARTHWORKS
- VDP CABLE EASEMENT
- PEDESTRIAN SAFTY FENCE
- CYCLIST FRIENDLY SAFETY FENCE

- ARTERIAL ROAD PAVEMENT
- SECONDARY ROAD PAVEMENT
- CONNECTOR ROAD PAVEMENT
- CONCRETE MEDIAN AND ISLAND
- 2 WAY BIKE PATH
- SHARED USE PATH
- FOOTPATH
- LANDSCAPE AREA

FINAL

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F	GC	30.01.25	CHANGES BASED ON LAND TAKE FEEDBACK
E	GC	05.12.24	CHANGES BASED ON LAND TAKE FEEDBACK
D	JM	26.08.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
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GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
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CROSKELL CROSS SECTIONS, NOTES AND LEGEND

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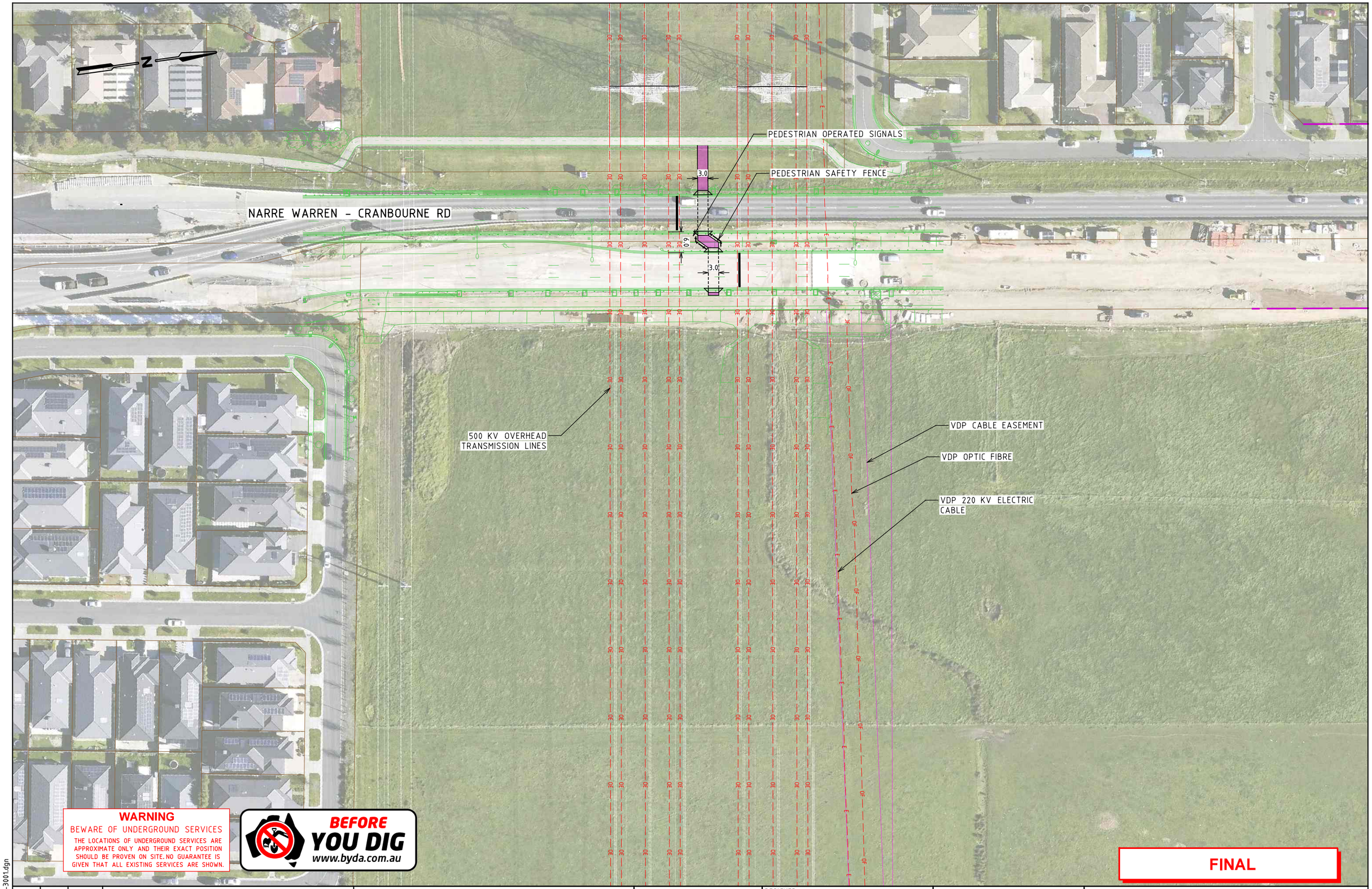

WARNING

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PED-01 – NARRE WARREN CRANBOURNE RD GENERAL ALIGNMENT PLAN

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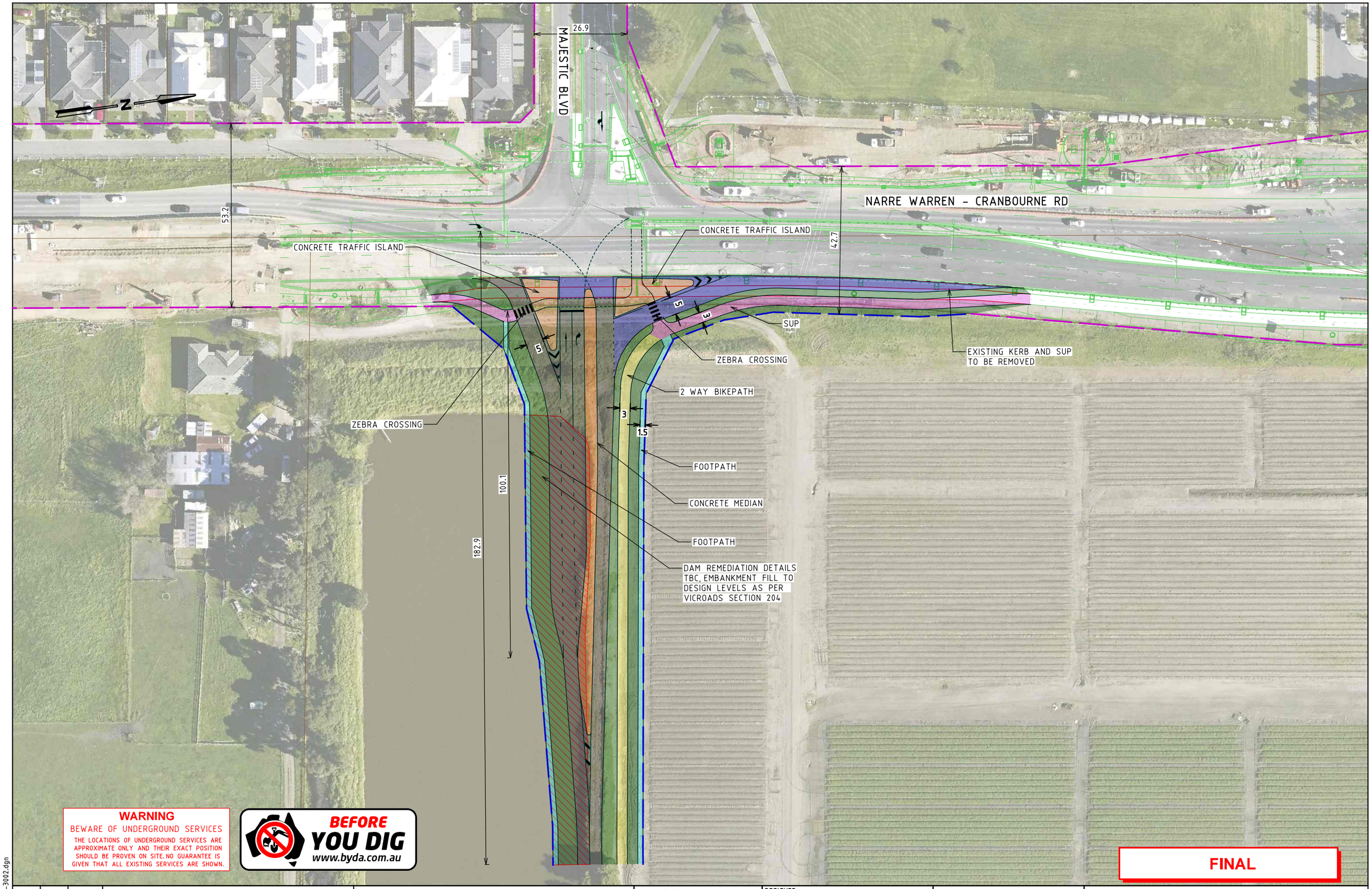

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E	GC	05.12.24	CHANGES BASED ON LAND TAKE FEEDBACK
D	JM	26.08.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
CAT:
PROJ:
FILE: 30043407--3002.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

IN-04 - NARRE-WARREN CRANBOURNE RD
GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	2	-3002	F

3/02/2025 3:54:00 PM Default 30043407--3002.dgn

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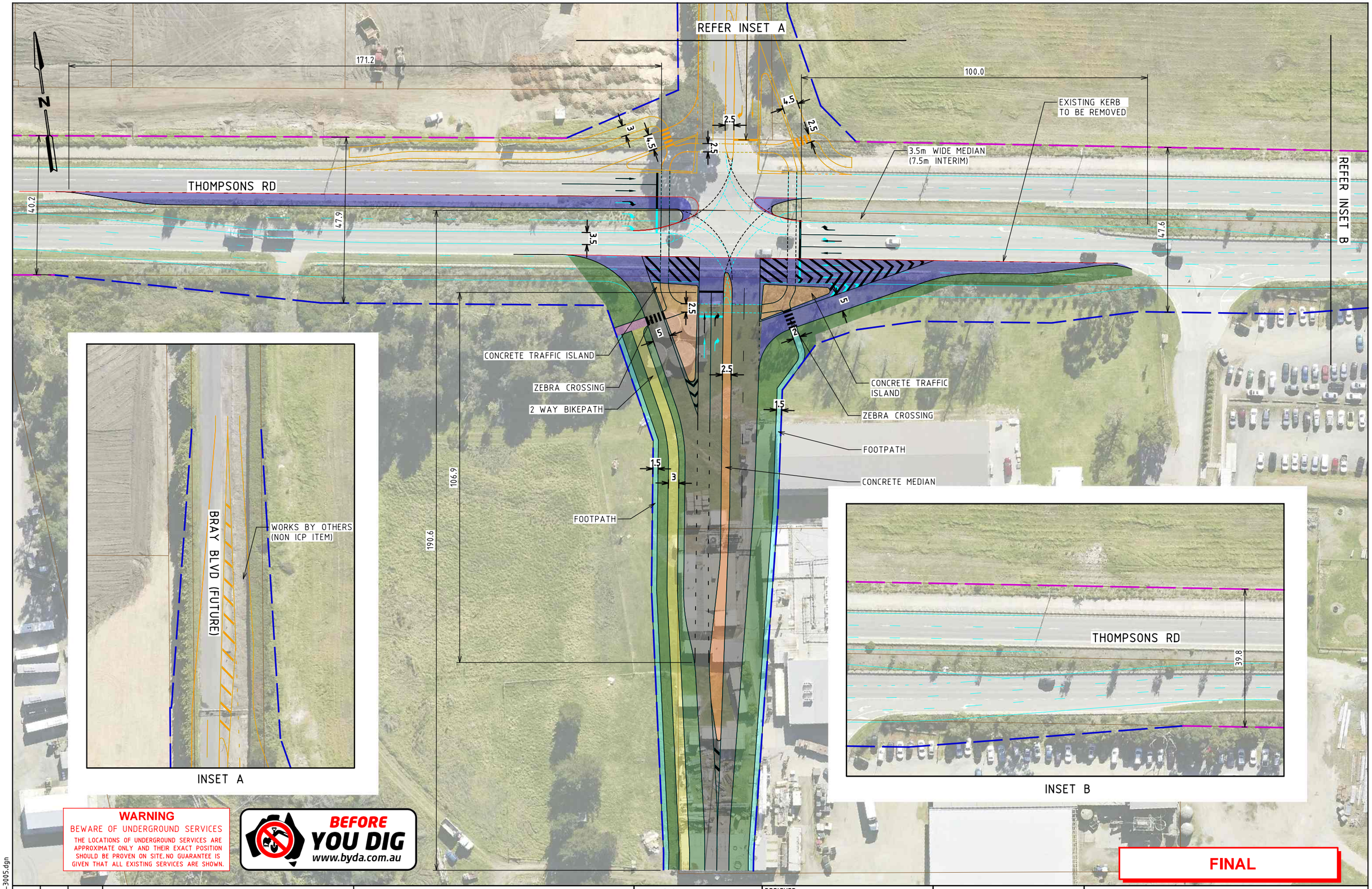

ISSUE	APP'D	DATE	AMENDMENT
F	GC	30.01.25	CHANGES BASED ON LAND TAKE FEEDBACK
E	GC	05.12.24	CHANGES BASED ON LAND TAKE FEEDBACK
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C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
CAT:
PROJ:
FILE: 30043407--3005.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

IN-01 - THOMPSONS RD/ CONNECTOR
GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	5	-3005	F

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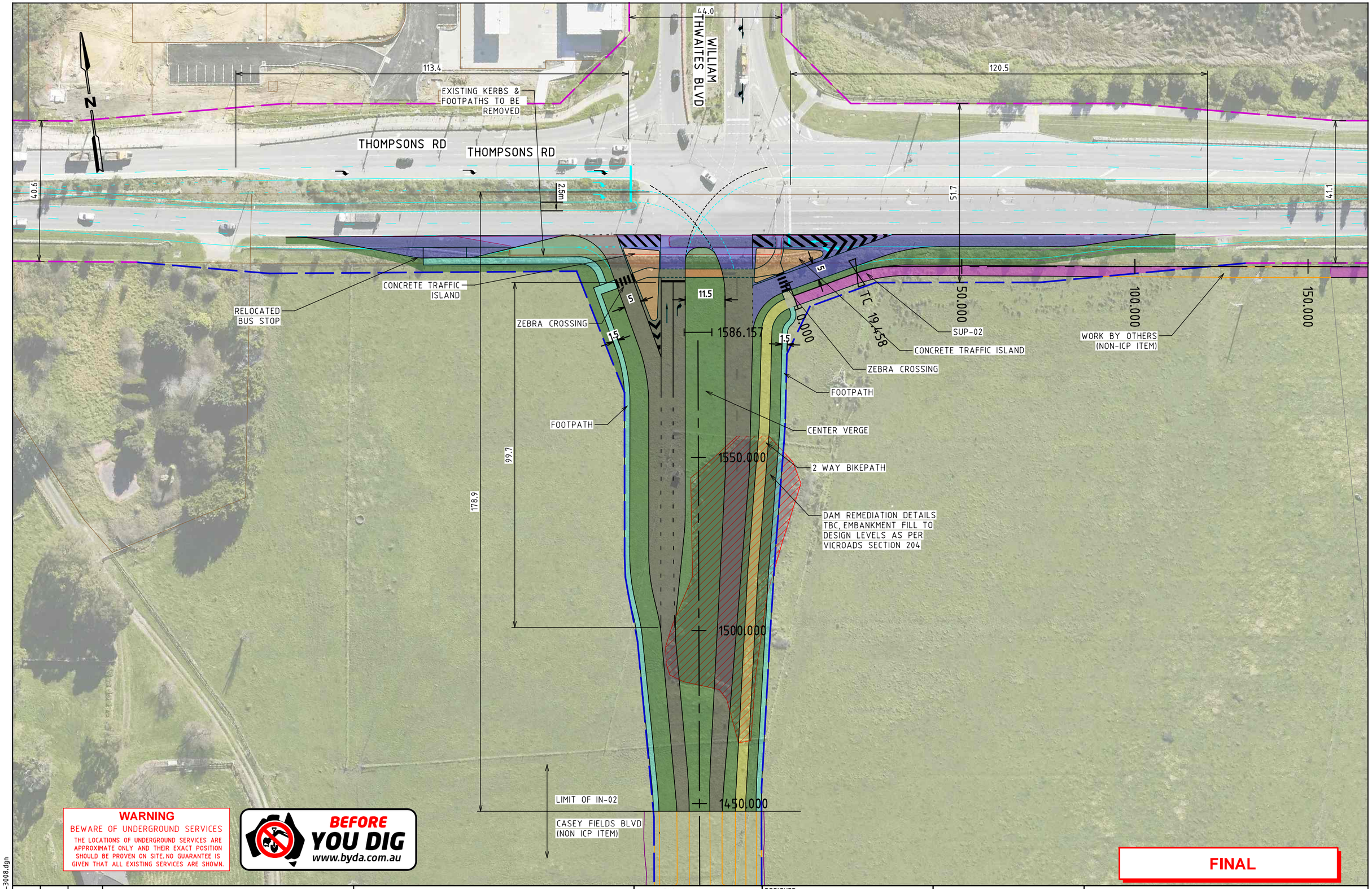

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

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ISSUE	APP'D	DATE	AMENDMENT
F	GC	30.01.25	CHANGES BASED ON LAND TAKE FEEDBACK
E	GC	05.12.24	CHANGES BASED ON LAND TAKE FEEDBACK
D	JM	26.08.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
CAT:
PROJ:
FILE: 30043407--3008.dgn

Victorian Planning Authority
SCALE OF METRES
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VICTORIAN PLANNING AUTHORITY

IN-02 - THOMPSONS RD/WILLIAM THWAITES BVD GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	8	-3008	F

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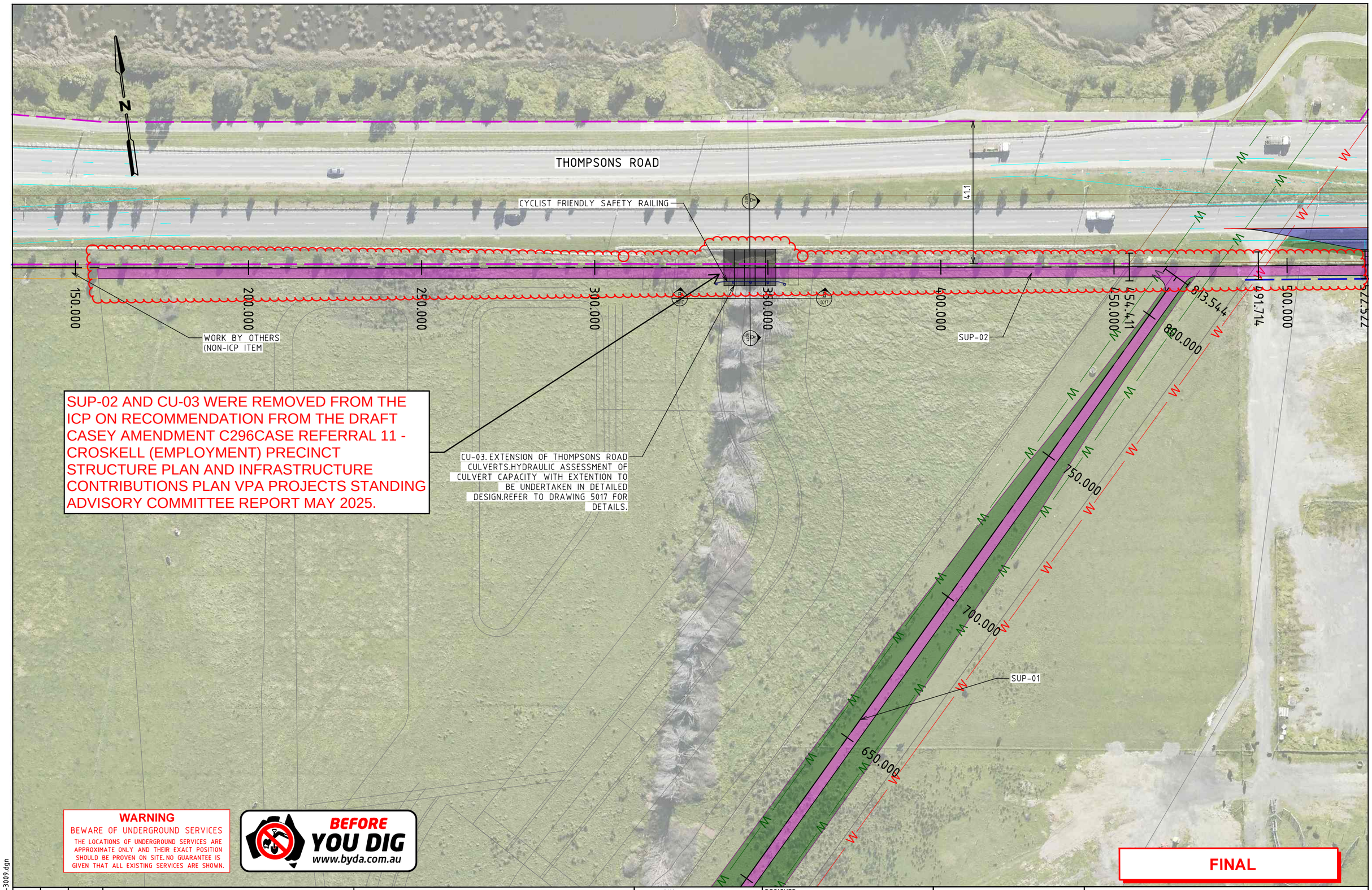

ISSUE	APP'D	DATE	AMENDMENT
F	GC	30.01.25	CHANGES BASED ON LAND TAKE FEEDBACK
E	GC	05.12.24	CHANGES BASED ON LAND TAKE FEEDBACK
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C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--3009.dgn

Victorian Planning Authority

SCALE OF METRES HOR 0 10 20 VER

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

SUP-02 - SHARED USE PATH GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	9	-3009	F

3/02/2025 3:54:04 PM Default 30043407--3009.dgn

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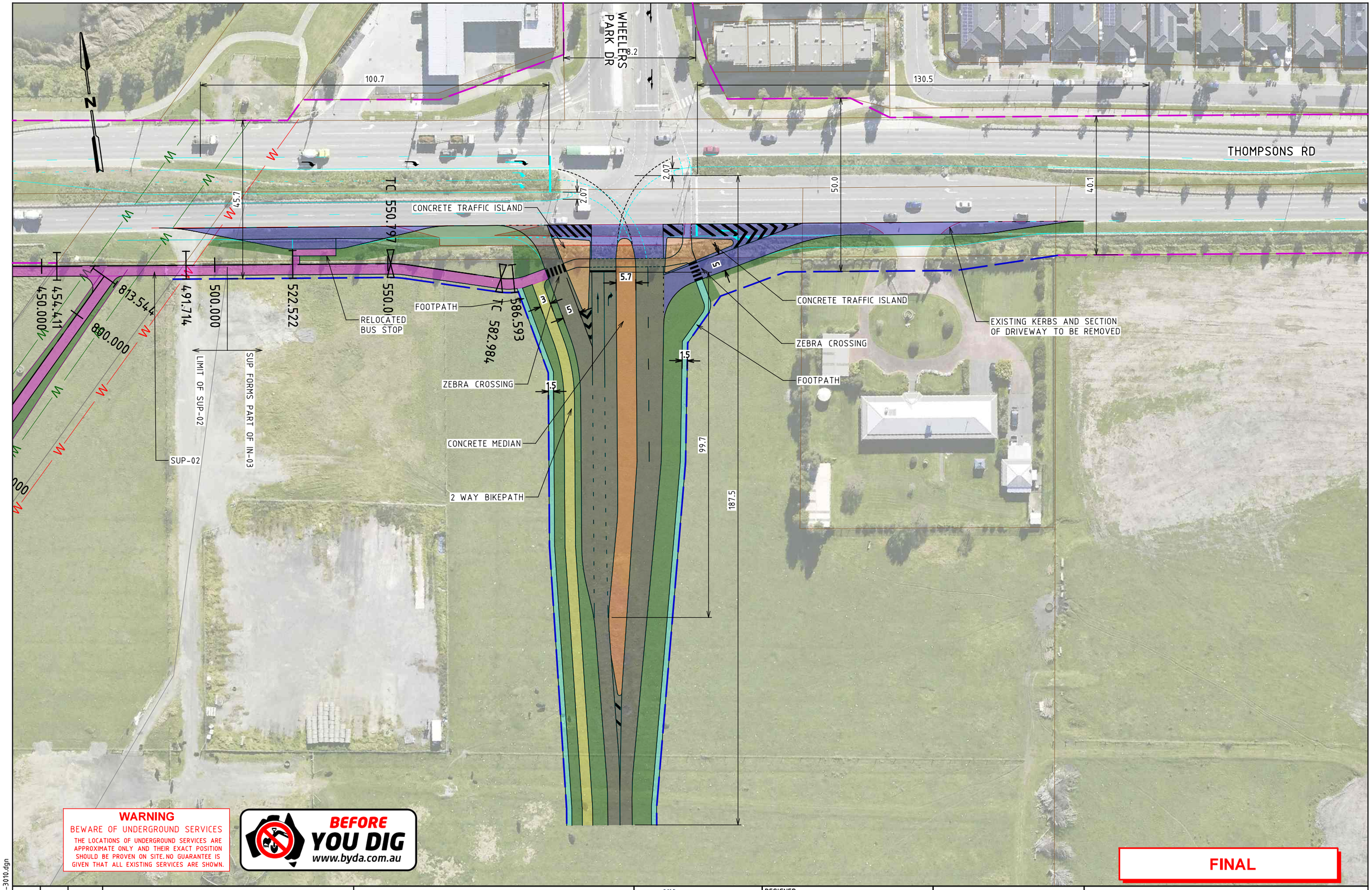

WARNING

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ISSUE	APP'D	DATE	AMENDMENT
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C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--3010.dgn

Victorian Planning Authority

SCALE OF METRES HOR 0 10 20 VER

CROSSKELL PSP

VICTORIAN PLANNING AUTHORITY

IN-03 THOMPSONS RD/WHEELERS PARK DR GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	10	-3010	F

3/02/2025 6:23:11 PM Default 30043407--3010.dgn

HD16335 Standard_VR_PDF_SMEC.pltcfg mscol2.tbl V:_Vault\Projects\3004\30043407\110_CADD\CAD\DRAWINGS\30043407--3010.dgn

N

186.3

99.7

CONCRETE MEDIAN

ZEBRA CROSSING

FOOTPATH

EXISTING KERBS TO BE REMOVED

CONCRETE TRAFFIC ISLAND

2 WAY BIKEPATH

ZEBRA CROSSING

SUP

RELOCATED BUS STOP

CONCRETE TRAFFIC ISLAND

BERWICK CRANBOURNE RD

HAMERSLEY DR

2

5

1.5

5

2.4

3

3

5.13

3.5

142.8

46.6

171.5

WARNING

BEWARE OF UNDERGROUND SERVICES

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ISSUE	APP'D	DATE	AMENDMENT
F	GC	30.01.25	CHANGES BASED ON LAND TAKE FEEDBACK
E	GC	05.12.24	CHANGES BASED ON LAND TAKE FEEDBACK
D	GC	05.12.24	CHANGES BASED ON LAND TAKE FEEDBACK
C	JM	26.08.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--3013.dgn

Victorian Planning Authority

SCALE OF METRES HOR 0 10 20 VER

CROSSKELL PSP

VICTORIAN PLANNING AUTHORITY

IN-05 BERWICK CRANBOURNE RD/HAMERSLEY DR GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	13	-3013	F

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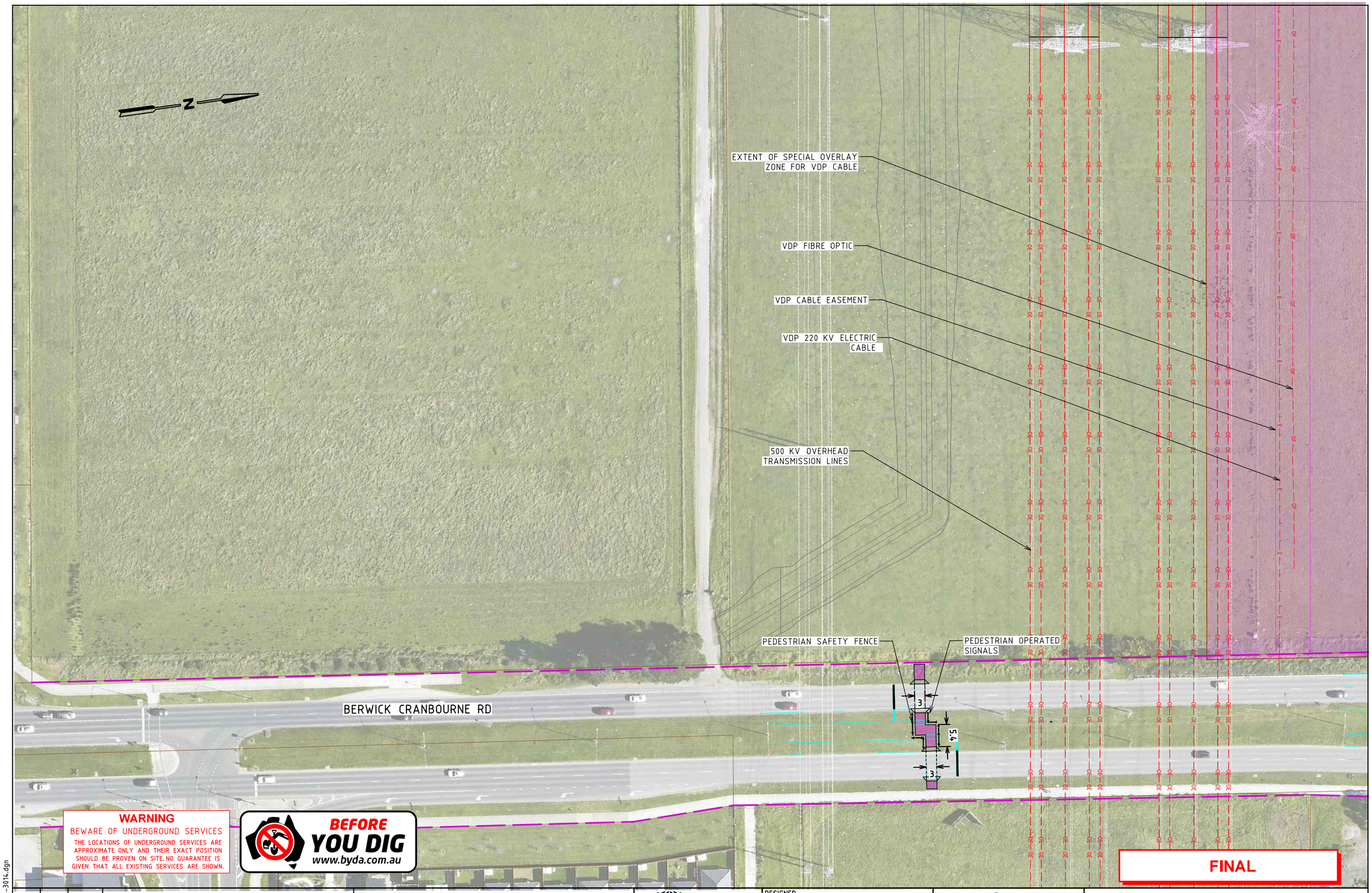

ISSUE	APP'D	DATE	AMENDMENT
C	JM	26.08.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC
Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
CAT:
PROJ:
FILE: 30043407--3014.dgn

Victorian Planning Authority

SCALE OF METRES
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VICTORIAN PLANNING AUTHORITY

PED-02 - BERWICK CRANBOURNE RD
GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	14	-3014	C

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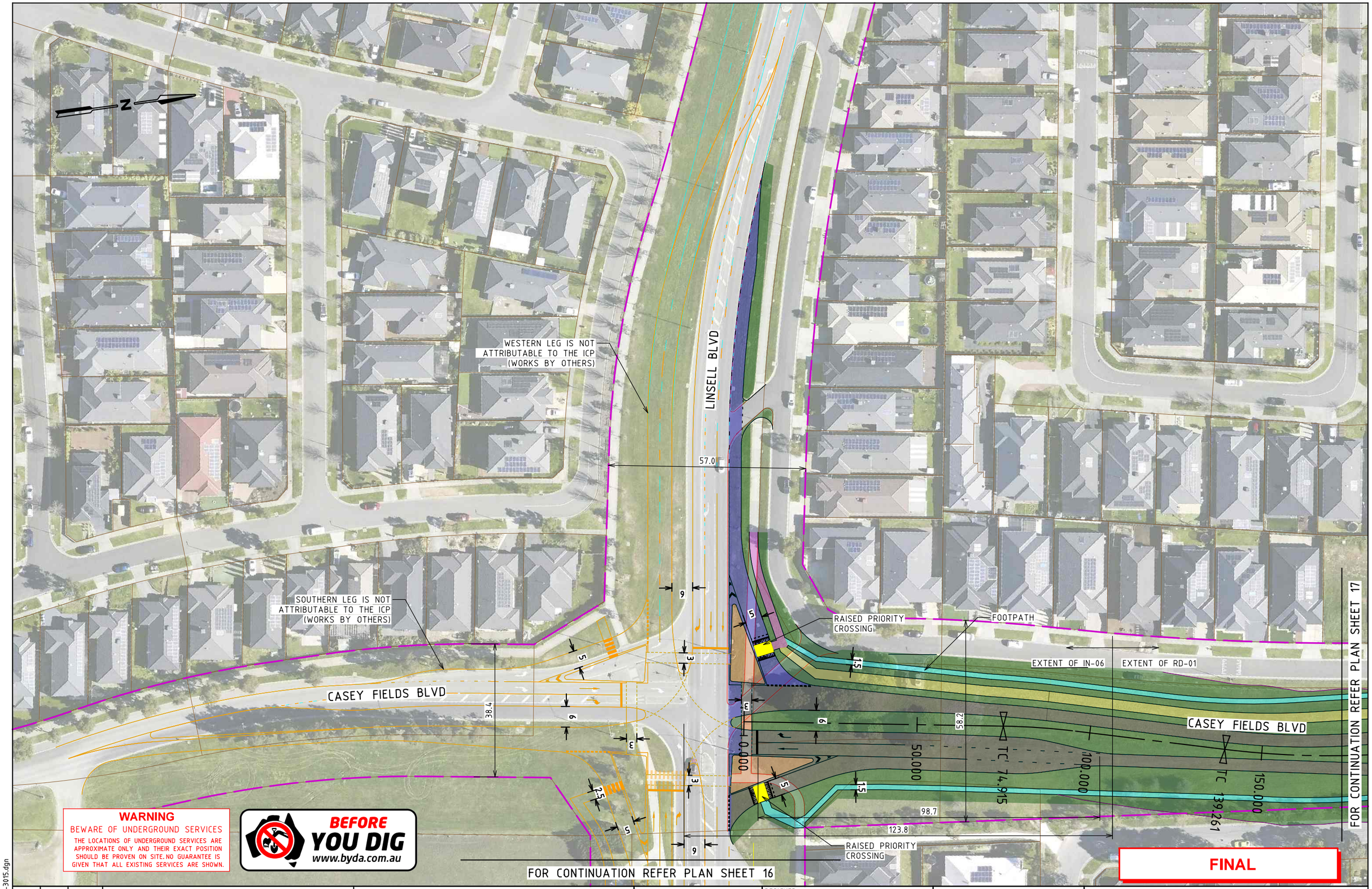

ISSUE	APP'D	DATE	AMENDMENT
D	GC	05.12.24	CHANGES BASED ON LAND TAKE FEEDBACK
C	JM	26.08.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE

Victorian Planning Authority

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SCALE OF METRES
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CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

IN-06 - CASEY FIELDS BVD/LINSELL BVD
GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	15	-3015	E

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ISSUE	APP'D	DATE	AMENDMENT
C	GC	05.12.24	CHANGES BASED ON LAND TAKE FEEDBACK
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC
Member of the Surbana Jurong Group

DESIGNED
A GREENWOOD

APPROVED
J MACKIE

CAT:
PROJ:
FILE: 30043407--3016.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

IN-06 - CASEY FIELDS BVD/LINSELL BVD
GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	16	-3016	C

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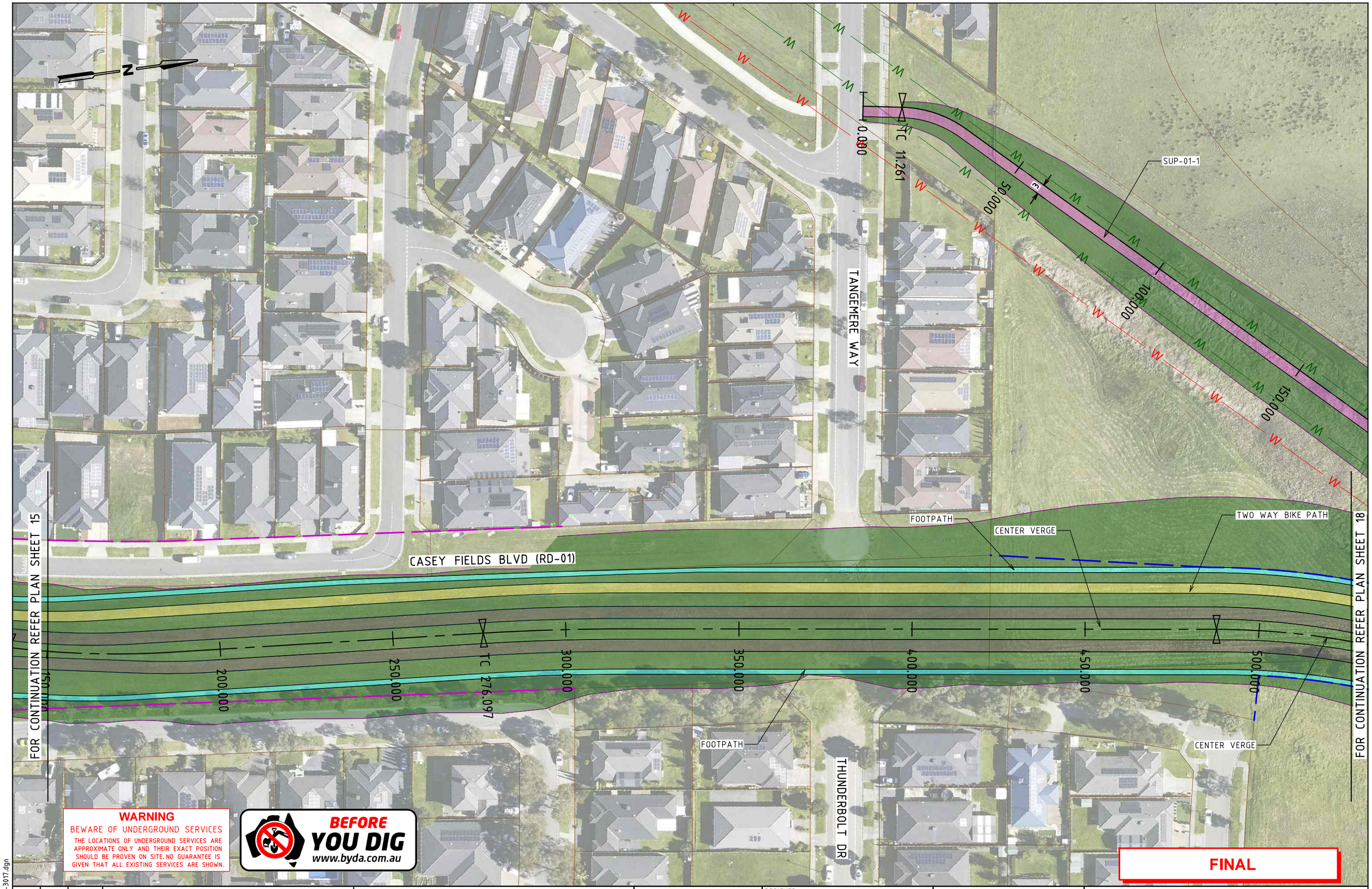

ISSUE	APP'D	DATE	AMENDMENT
C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC
Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
CAT:
PROJ:
FILE: 30043407--3017.dgn

Victorian Planning Authority

SCALE OF METRES
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CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

RD-01 - CASEY FIELDS BOULEVARD
GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	17	-3017	D

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HD16335 Standard_VR_PDF_SMEC.pltcfg mscol2.tbl V:_Vault\Projects\3004\30043407\110_CADD\CAD\DRAWINGS\30043407--3017.dgn

FOR CONTINUATION REFER PLAN SHEET 17

TWO WAY BIKE PATH

FOOTPATH

CENTER VERGE

FOOTPATH

SUP-01

FUTURE DETAILED DESIGN WILL NEED TO DETERMINE IF THERE ARE ANY EASEMENTS AND TO DESIGN THE ROAD ACCORDINGLY

WATERWAY (MELBOURNE WATER DSS)

SUP-01 TERMINATES

FOOTPATH

CASEY FIELDS BLVD (RD-01)

RAISED CROSSING MEET THE REQUIRENMENT OF SPEEP HUMP SECTION OF "TRAFFIC CALMING DEVICES FOR BUSES" ROAD DESIGN NOTE

FOOTPATH

TWO WAY BIKE PATH

REDUCED CENTER VERGE

CU-01. REFER TO DRAWING 5015 FOR DETAILS.

RAISED CROSSING MEET THE REQUIRENMENT OF SPEEP HUMP SECTION OF "TRAFFIC CALMING DEVICES FOR BUSES" ROAD DESIGN NOTE

OH TRANSMISSION LINES

FOR CONTINUATION REFER PLAN SHEET 19

WARNING

BEWARE OF UNDERGROUND SERVICES

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ISSUE	APP'D	DATE	AMENDMENT
E	GC	30.01.25	CHANGES BASED ON LAND TAKE FEEDBACK
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A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

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PROJ:

FILE: 30043407--3018.dgn

Victorian Planning Authority

SCALE OF METRES HOR 0 10 20 VER

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VICTORIAN PLANNING AUTHORITY

RD-01 - CASEY FIELDS BOULEVARD GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	18	-3018	E

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HD16335 Standard_VR_PDF_SMEC.pltcfg mscol2.tbl V:_Vault\Projects\3004\30043407\110_CADD\CAD\DRAWINGS\30043407--3018.dgn

RAISED CROSSING MEET THE REQUIRENMENT OF SPEEP HUMP SECTION OF "TRAFFIC CALMING DEVICES FOR BUSES" ROAD DESIGN NOTE

VDP CABLE EASTMENT

VDP 220 KV ELECTRIC CABLE

VDP FIBRE OPTIC

SPECIAL CONTROLS OVERLAY EXTENT

OH TRANSMISSION LINES

500KV OH TRANSMISSION LINES

500KV OH TRANSMISSION LINES

LIMT OF RD-01

CASEY FIELDS BLVD (NON ICP ITEM)

FOR CONTINUATION REFER PLAN SHEET 18

CASEY FIELDS BLVD (RD-01)

TC 100.976

FOOTPATH

WORKS BY OTHERS (NON ICP ITEM)

850.000

900.000

950.000

7.6

1000.000

000.0

1050.000

1100.000

TC 121.518

1150.000

1200.000

EXTENT OF THERMAL BACKFILL, REFER TO DWG 5012

FOOTPATH

ARCHAEOLOGICALLY SENSITIVE AREA

50.000

WORKS BY OTHERS (NON ICP ITEM)

TC 87.304

100.800

SUP-01-2

150.000

FOR CONTINUATION REFER PLAN SHEET 21

WARNING

BEWARE OF UNDERGROUND SERVICES

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FINAL

ISSUE	APP'D	DATE	AMENDMENT
E	GC	06.02.25	CHANGES BASED ON LAND TAKE FEEDBACK
D	GC	30.01.25	CHANGES BASED ON LAND TAKE FEEDBACK
C	JM	26.08.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--3019.dgn

Victorian Planning Authority

SCALE OF METRES HOR 0 10 20 VER

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VICTORIAN PLANNING AUTHORITY

RD-01 - CASEY FIELDS BOULEVARD GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	19	-3019	F

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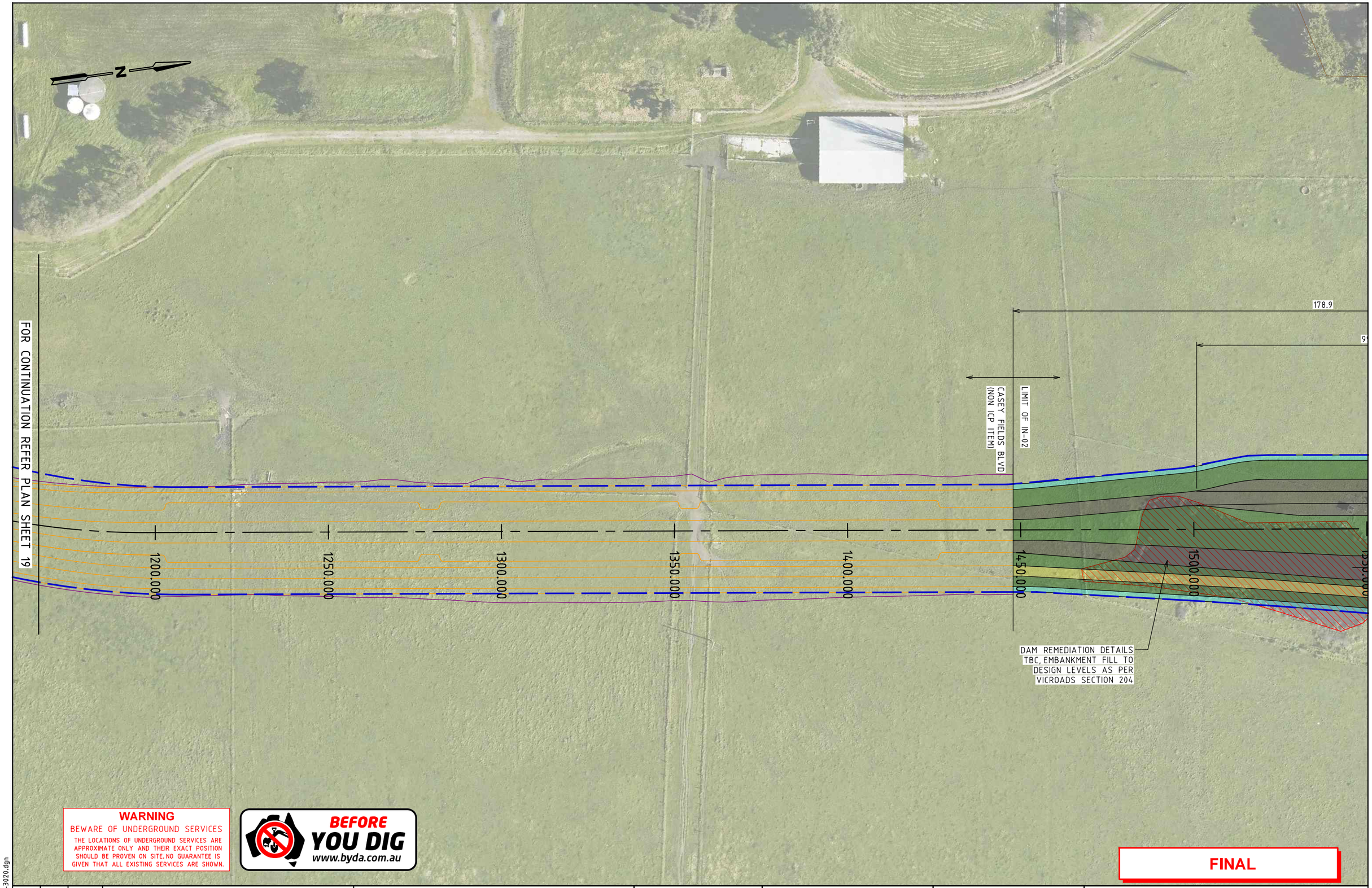

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FINAL

ISSUE	APP'D	DATE	AMENDMENT
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
CAT:
PROJ:
FILE: 30043407--3020.dgn

Victorian Planning Authority
SCALE OF METRES HOR 0 10 20 VER

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

NON ICP ITEM - CASEY FIELDS BOULEVARD
GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	20	-3020	B

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HD16335 Standard_VR_PDF_SMEC.pltcfg mscol2.tbl V:_Vault\Projects\3004\30043407\110_CADD\CAD\DRAWINGS\30043407--3020.dgn

FINAL

ISSUE	APP'D	DATE	AMENDMENT
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B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC
Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
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PROJ:
FILE: 30043407--3021.dgn

Victorian Planning Authority

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VER

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VICTORIAN PLANNING AUTHORITY

SUP-01 - SHARED USE PATH
GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	21	-3021	D

Default 30043407--3021.dgn
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HD16335 Standard_VR_PDF_SMEC.pltcfg mscol2.tbl V:_Vault\Projects\3004\30043407\110_CADD\CAD\DRAWINGS\30043407--3021.dgn

WATERWAY (MELBOURNE WATER DSS)

EXISTING M478 WATER MAIN-1350 DIA

EXISTING M418 WATER MAIN-1050 DIA

ABANDONED WATER MAIN-600 DIA

CU-02.LOW FLOW CULVERT CROSSING TO BE DESIGNED FOR 1EY FLOOD LEVEL TO AVOID FREQUENT FLOWS OVER THE SUP. HYDRAULIC ASSESSMENT OF WATERWAY CAPACITY WITH CULVERT IN PLACE TO BE UNDERTAKEN IN DETAILED DESIGN. REFER TO DRAWING 5016 FOR DETAILS

CYCLIST FRIENDLY SAFETY RAILING

SUP-01

SUP-02

FOR CONTINUATION REFER PLAN SHEET 21

450.000 500.000 550.000 600.000 650.000 700.000 750.000 800.000 813.544 350.000 400.000 41.1 454.471 450.000 491.714 500.000 7.522

WARNING

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FINAL

ISSUE	APP'D	DATE	AMENDMENT
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C	GC	05.12.24	CHANGES BASED ON LAND TAKE FEEDBACK
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--3022.dgn

Victorian Planning Authority

SCALE OF METRES HOR 0 10 20 VER

CROSSKELL PSP

VICTORIAN PLANNING AUTHORITY

SUP-01 - SHARED USE PATH GENERAL ALIGNMENT PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	22	-3022	E

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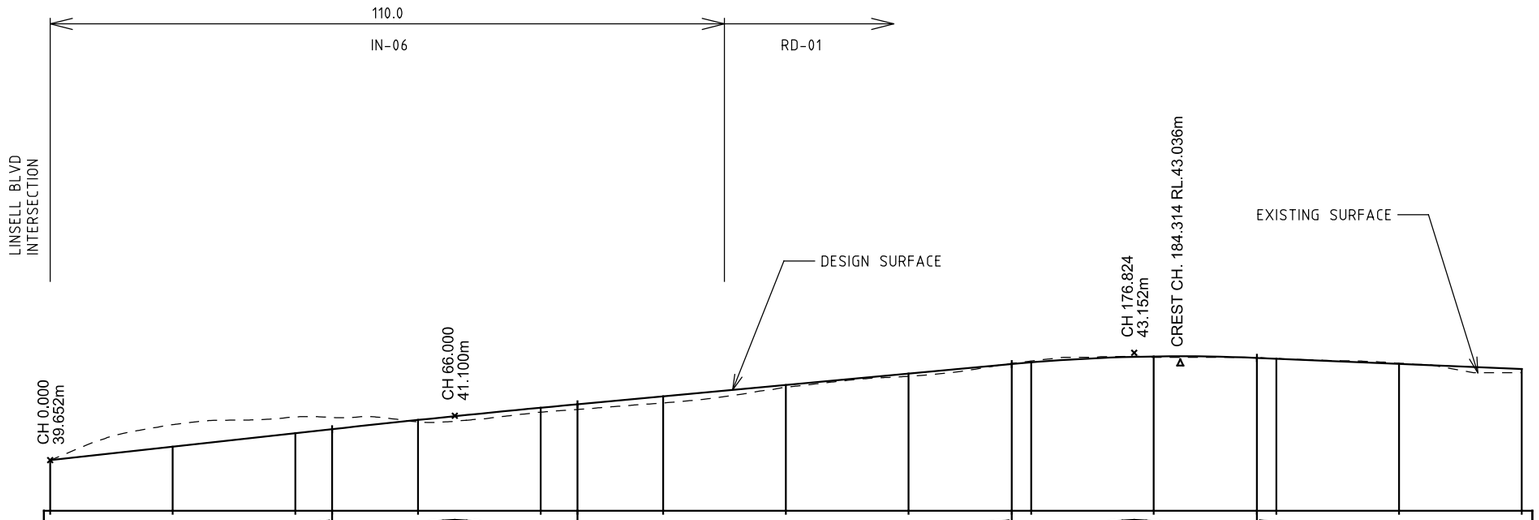

DESIGN SURFACE LEVELS	39.652	40.091	40.529	40.661	40.960	41.358	41.470	41.730	42.100	42.470	42.782	42.837	43.030	42.984	42.957	42.788	42.620						
EXISTING SURFACE LEVELS	39.642	40.808	41.060	41.039	40.896	41.214	41.305	41.512	42.023	42.379	42.801	42.881	43.000	42.998	42.963	42.808	42.500						
CHAINAGE	0.000	20.000	40.000	46.000	60.000	80.000	86.000	100.000	120.000	140.000	156.824	160.000	180.000	196.824	200.000	220.000	240.000						

LONGITUDINAL SECTION RD-01 - CASEY FIELDS BLVD

H 1:1000 V 1:200

FINAL

ISSUE	APP'D	DATE	AMENDMENT
C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	01.05.24	FINAL CONCEPT DESIGN
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--5001.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

LONGITUDINAL SECTION
RD-01 - CASEY FIELDS BLVD - SHEET 1

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5001	C

3/02/2025 3:54:13 PM Default 30043407--5001.dgn

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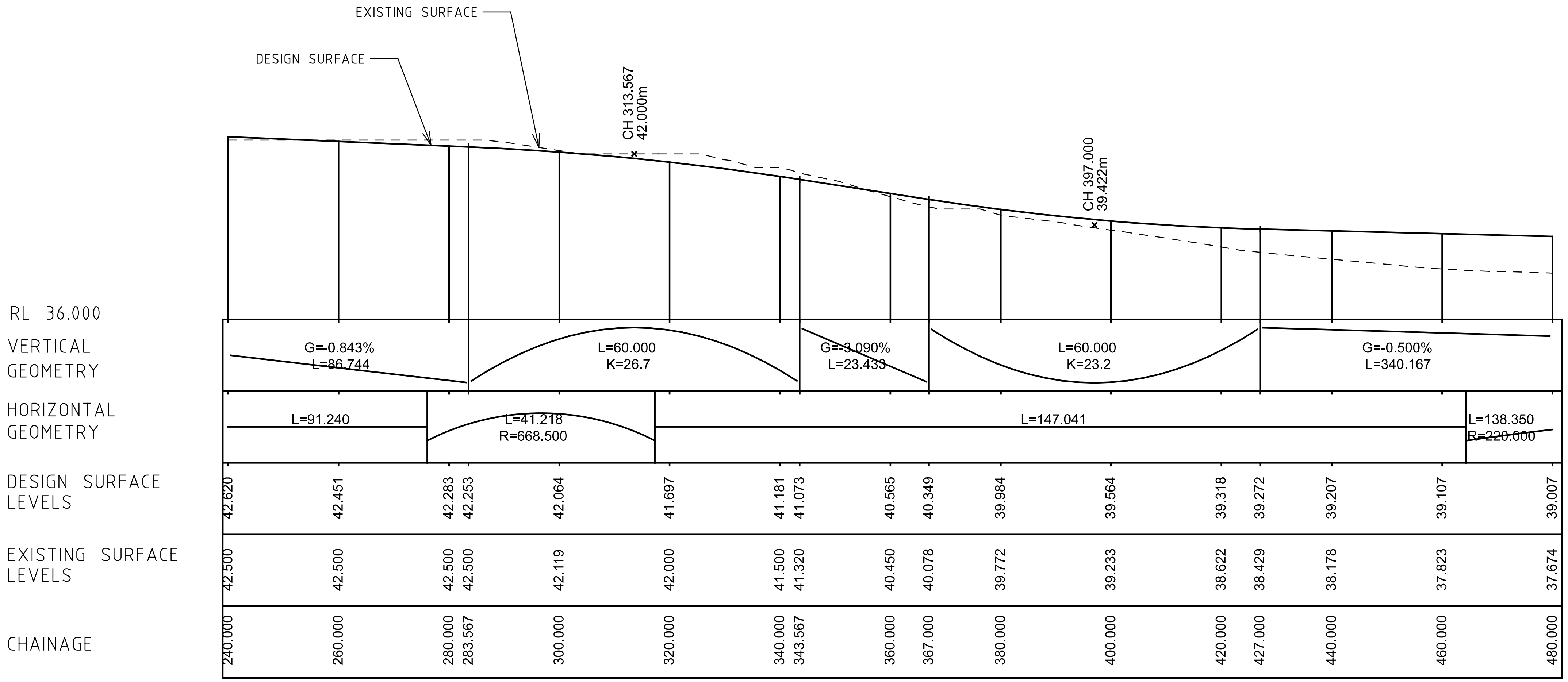


CHAINAGE	DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS
240.000	42.620	42.500
260.000	42.451	42.500
280.000	42.283	42.500
283.567	42.253	42.500
300.000	42.064	42.119
320.000	41.697	42.000
340.000	41.181	41.500
343.567	41.073	41.320
360.000	40.565	40.450
367.000	40.349	40.078
380.000	39.984	39.772
400.000	39.564	39.233
420.000	39.318	38.622
427.000	39.272	38.429
440.000	39.207	38.178
460.000	39.107	37.823
480.000	39.007	37.674

LONGITUDINAL SECTION RD-01 - CASEY FIELDS BLVD

H 1:1000 V 1:200

FINAL

ISSUE	APP'D	DATE	AMENDMENT
C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	01.05.24	FINAL CONCEPT DESIGN
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

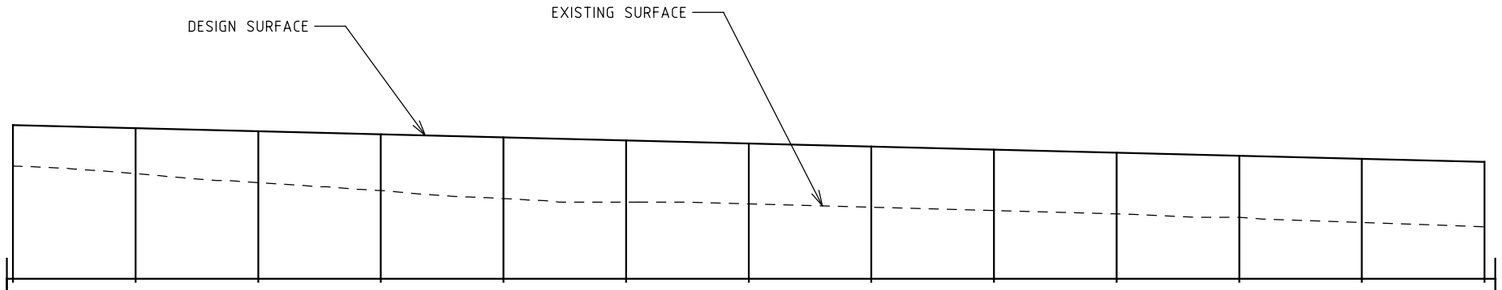
DESIGNED
A GREENWOOD
APPROVED
J MACKIE
CAT:
PROJ:
FILE: 30043407--5002.dgn

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

LONGITUDINAL SECTION
RD-01 - CASEY FIELDS BLVD - SHEET 2

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5002	C



RL 34.000												
VERTICAL GEOMETRY	G=-0.500% L=340.167											
HORIZONTAL GEOMETRY	L=138.350 R=220.000						L=109.773					L=139.984 R=-221.200
DESIGN SURFACE LEVELS	39.007	38.907	38.807	38.707	38.607	38.507	38.407	38.307	38.207	38.107	38.007	37.907	37.807
EXISTING SURFACE LEVELS	37.674	37.428	37.135	36.875	36.611	36.500	36.443	36.333	36.224	36.115	35.999	35.834	35.694
CHAINAGE	480.000	500.000	520.000	540.000	560.000	580.000	600.000	620.000	640.000	660.000	680.000	700.000	720.000

LONGITUDINAL SECTION RD-01 - CASEY FIELDS BLVD

H 1:1000 V 1:200

FINAL

ISSUE	APP'D	DATE	AMENDMENT
C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	01.05.24	FINAL CONCEPT DESIGN
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--5003.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

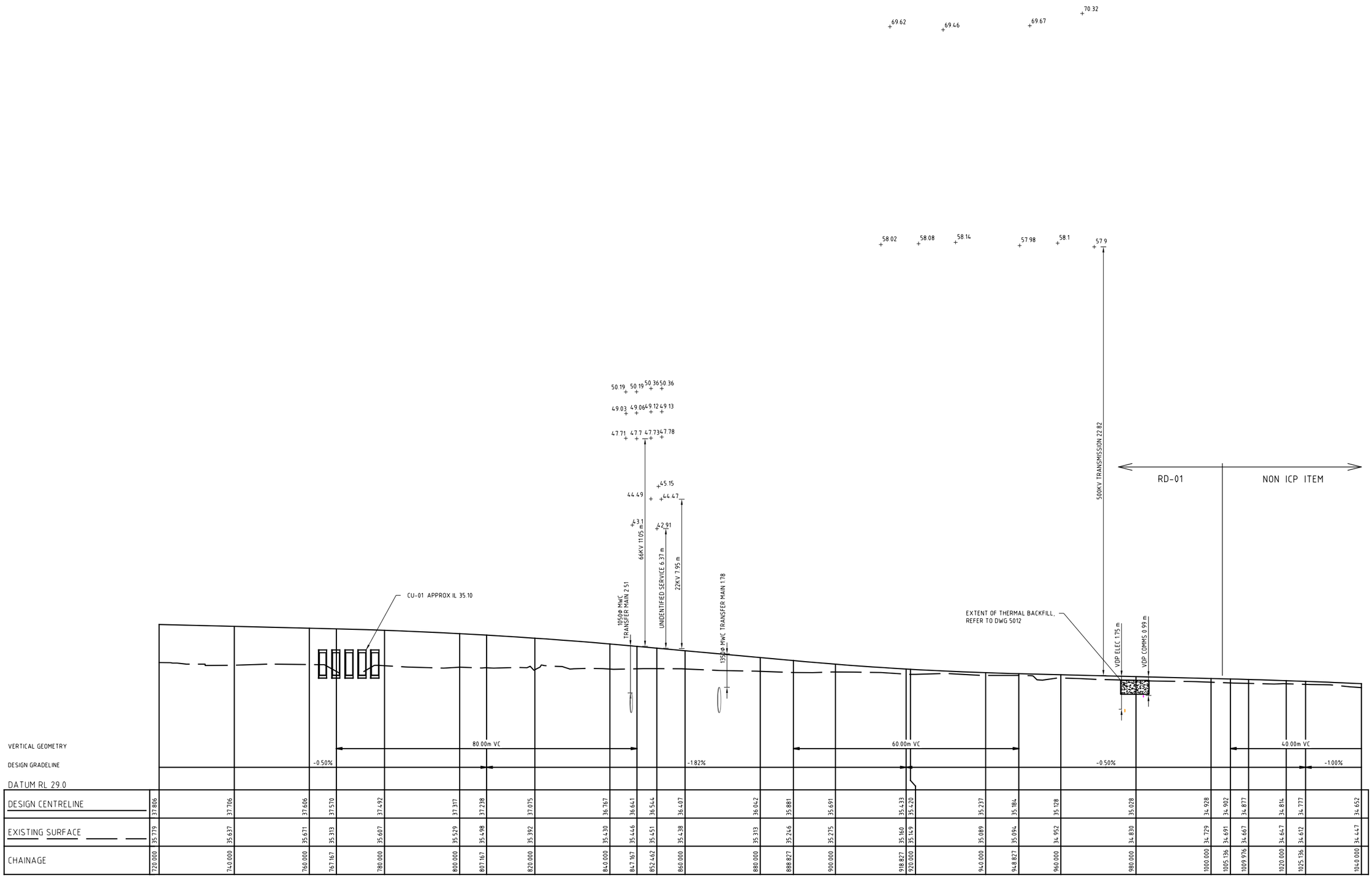
CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

LONGITUDINAL SECTION
RD-01 - CASEY FIELDS BLVD - SHEET 3

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5003	C

3/02/2025 3:54:13 PM Default 30043407--5003.dgn

HD16335 Standard_VR_PDF_SMEC.pltcfg mscol2.tbl V:_Vault\Projects\3004\30043407\110_CADD\CAD\DRAWINGS\30043407--5003.dgn



DESIGN CENTRELINE	37.806	37.706	37.606	37.570	37.492	37.317	37.238	37.075	36.767	36.641	36.544	36.407	36.042	35.881
EXISTING SURFACE	35.779	35.637	35.671	35.313	35.607	35.529	35.498	35.392	35.430	35.446	35.451	35.438	35.313	35.246
CHAINAGE	720.000	740.000	760.000	767.167	780.000	800.000	807.167	820.000	840.000	847.167	852.462	860.000	880.000	888.827

DESIGN CENTRELINE	35.691	35.433	35.420	35.237	35.184	35.128	35.028	34.928	34.902	34.877	34.814	34.777	34.652
EXISTING SURFACE	35.275	35.160	35.149	35.089	35.094	34.952	34.830	34.729	34.691	34.667	34.647	34.612	34.447
CHAINAGE	900.000	918.827	920.000	940.000	948.827	960.000	980.000	1000.000	1005.136	1009.976	1020.000	1025.136	1040.000

LONGITUNDIAL SECTION RD-01 - CASEY FIELDS BLVD

FINAL

ISSUE	APP'D	DATE	AMENDMENT
C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	01.05.24	FINAL CONCEPT DESIGN
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

SMEC
Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
CAT:
PROJ:
FILE: 30043407--5004.dgn

Victorian Planning Authority

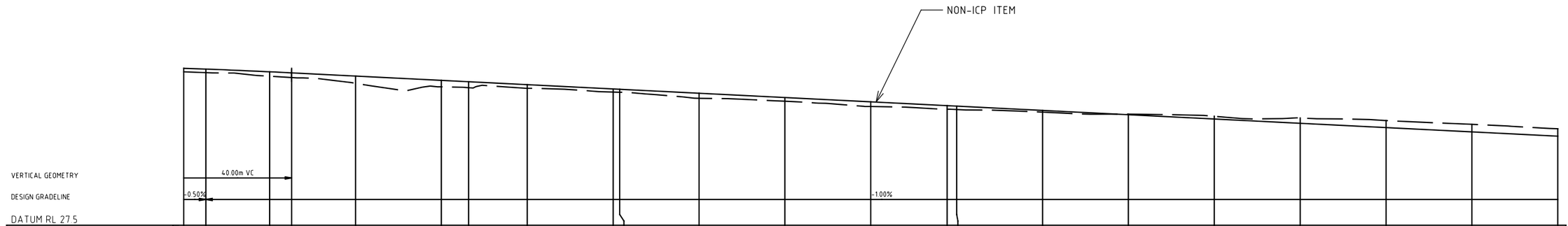
SCALE OF METRES
HOR 0 10 20
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

LONGITUDINAL SECTION
RD-01 - CASEY FIELDS BLVD - SHEET 4

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5004	C

3/02/2025 3:54:14 PM Default 30043407--5004.dgn



DESIGN CENTRELINE	34.814	34.777	34.652	34.602	34.454	34.254	34.190	34.054	33.854	33.839	33.654
EXISTING SURFACE	34.647	34.612	34.447	34.385	34.115	33.951	33.912	33.880	33.708	33.701	33.417
CHAINAGE	1020.000	1025.136	1040.000	1045.136	1060.000	1080.000	1086.352	1100.000	1120.000	1121.518	1140.000

DESIGN CENTRELINE	33.454	33.254	33.076	33.054	32.854	32.654	32.454	32.254	32.054	31.854	31.654
EXISTING SURFACE	33.278	33.032	32.909	32.893	32.771	32.675	32.580	32.495	32.379	32.201	31.994
CHAINAGE	1160.000	1180.000	1197.789	1200.000	1220.000	1240.000	1260.000	1280.000	1300.000	1320.000	1340.000

LONGITUNDIAL SECTION RD-01 - CASEY FIELDS BLVD

FINAL

ISSUE	APP'D	DATE	AMENDMENT
C	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	01.05.24	FINAL CONCEPT DESIGN
A	JM	22.01.24	DRAFT CONCEPT DESIGN

GENERAL NOTES

SMEC
Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
CAT:
PROJ:
FILE: 30043407--5005.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

LONGITUDINAL SECTION
RD-01 - CASEY FIELDS BLVD - SHEET 5

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5005	C

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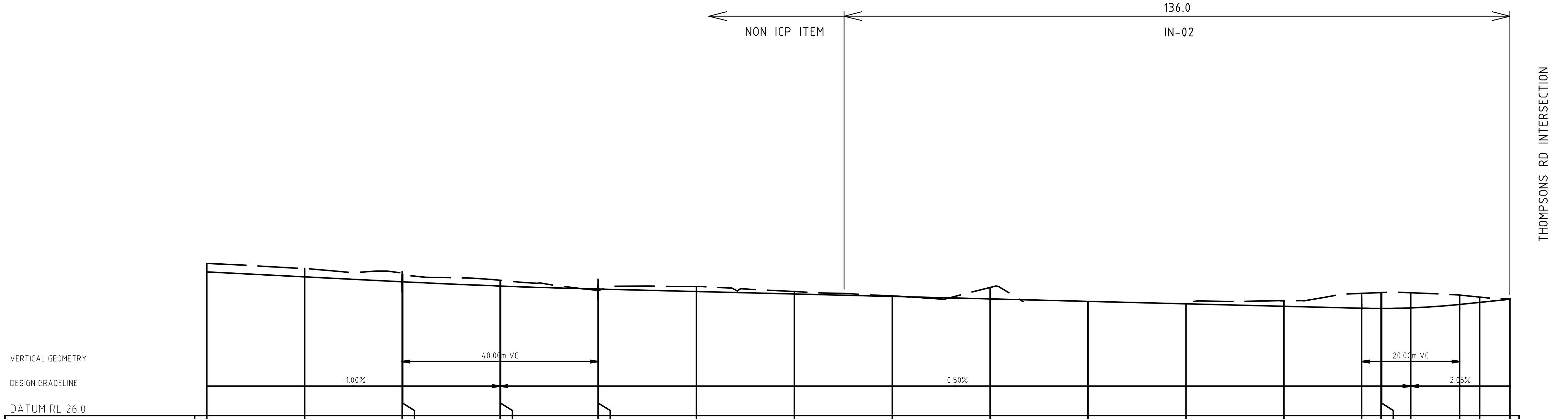

DATUM RL 26.0											
DESIGN CENTRELINE	31.854	31.654	31.455	31.454	31.280	31.279	31.155	31.154	31.054	30.954	30.854
EXISTING SURFACE	32.201	31.994	31.745	31.737	31.515	31.513	31.101	31.101	31.259	31.060	30.879
CHAINAGE	1320.000	1340.000	1359.899	1360.000	1379.899	1380.000	1399.899	1400.000	1420.000	1440.000	1460.000

DATUM RL 26.0											
DESIGN CENTRELINE	30.754	30.654	30.554	30.454	30.375	30.365	30.365	30.388	30.529	30.613	30.739
EXISTING SURFACE	31.224			30.676	30.978	31.011	31.013	31.005	30.908	30.828	30.751
CHAINAGE	1480.000	1500.000	1520.000	1540.000	1555.905	1559.830	1562.330	1565.905	1575.905	1580.000	1586.157

LONGITUNDIAL SECTION RD-01 - CASEY FIELDS BLVD

FINAL

ISSUE	APP'D	DATE	AMENDMENT
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC
Member of the Surbana Jurong Group

DESIGNED
A GREENWOOD

APPROVED
J MACKIE

CAT:
PROJ:
FILE: 30043407--5006.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

LONGITUDINAL SECTION
RD-01 - CASEY FIELDS BLVD - SHEET 6

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5006	B

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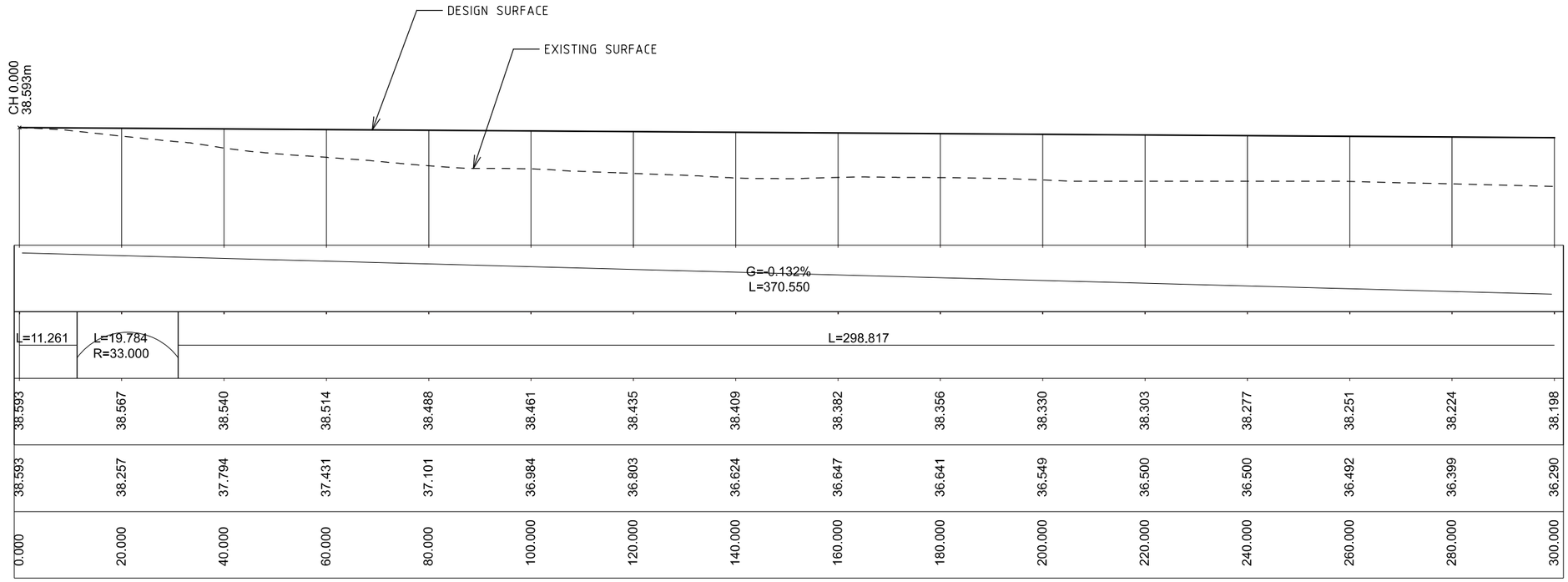

LONGITUDINAL SECTION - SUP-01-1

H 1:1000 V 1:200

FINAL

ISSUE	APP'D	DATE	AMENDMENT
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:
PROJ:
FILE: 30043407--5007.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

LONGITUDINAL SECTION
SUP-01 - SHARED USE PATH - SHEET 1

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5007	B

3/02/2025 3:54:14 PM Default 30043407--5007.dgn

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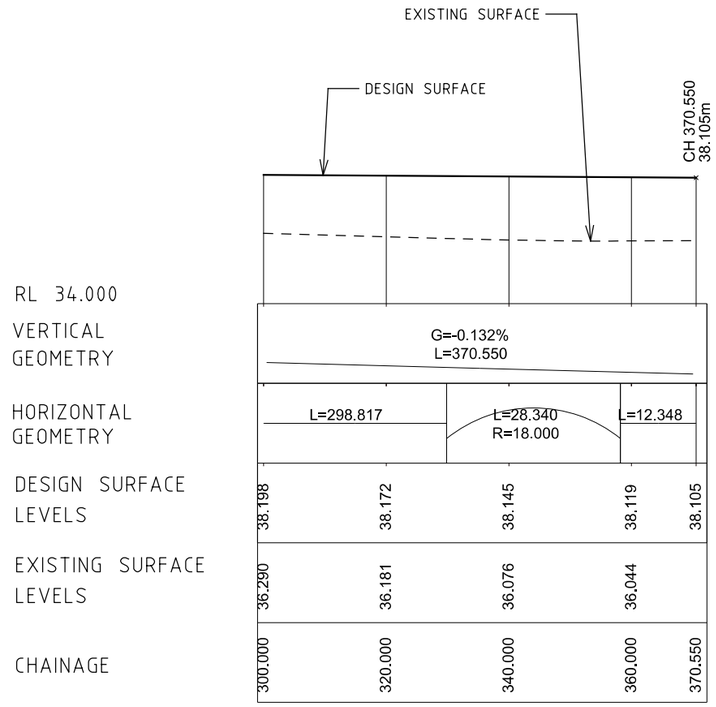

RL 34.000								
VERTICAL GEOMETRY								
HORIZONTAL GEOMETRY								
DESIGN SURFACE LEVELS	38.198		38.172		38.145		38.119	38.105
EXISTING SURFACE LEVELS	36.290		36.181		36.076		36.044	
CHAINAGE	300.000		320.000		340.000		360.000	370.550

LONGITUDINAL SECTION - SUP-01-1

H 1:1000 V 1:200

FINAL

ISSUE	APP'D	DATE	AMENDMENT
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--5008.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

LONGITUDINAL SECTION
SUP-01 - SHARED USE PATH - SHEET 2

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5008	B

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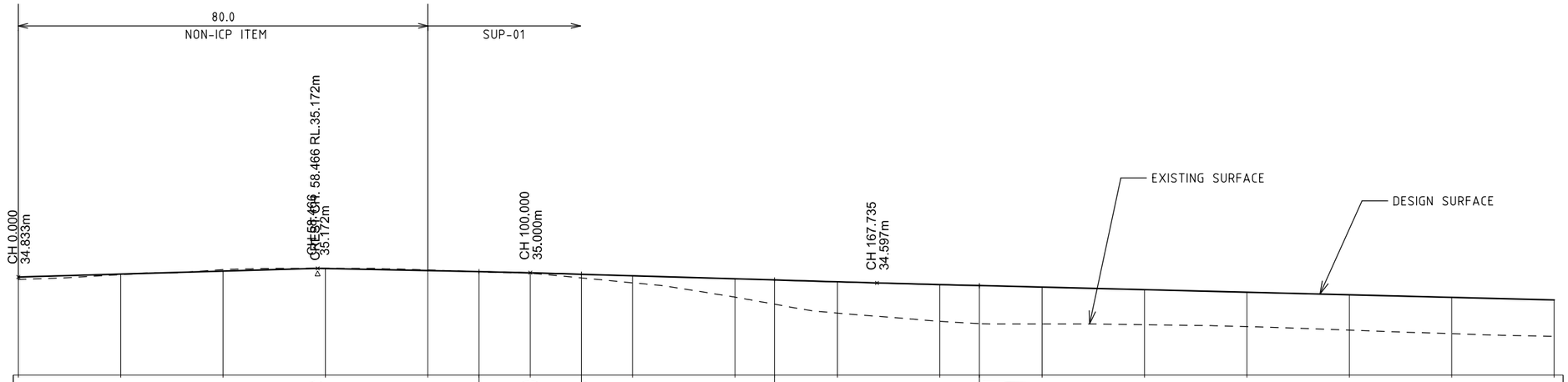

RL 31.000																						
VERTICAL GEOMETRY	G=0.579% L=58.466			G=-0.414% L=31.534		L=20.000 K=110.3		G=-0.595% L=37.736		L=40.000 K=420.9			G=-0.500% L=358.451									
HORIZONTAL GEOMETRY	L=87.304					L=26.126 R=-30.000							L=700.115									
DESIGN SURFACE LEVELS	34.833	34.949	35.065	35.165	35.083	35.041	34.995	34.941	34.881	34.762	34.716	34.645	34.536	34.497	34.436	34.336	34.236	34.136	34.036	33.936		
EXISTING SURFACE LEVELS	34.740	34.924	35.122	35.171	35.107	35.037	34.983	34.797	34.605	34.046	33.768	33.422	33.099	33.015	33.000	32.969	32.894	32.754	32.615	32.511		
CHAINAGE	0.000	20.000	40.000	60.000	80.000	90.000	100.000	110.000	120.000	140.000	147.735	160.000	180.000	187.735	200.000	220.000	240.000	260.000	280.000	300.000		

LONGITUDINAL SECTION - SUP-01-2

H 1:1000 V 1:200

FINAL

ISSUE	APP'D	DATE	AMENDMENT
C	GC	06.02.25	CHANGES BASED ON LAND TAKE FEEDBACK
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:
PROJ:
FILE: 30043407--5009.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

LONGITUDINAL SECTION
SUP-01 - SHARED USE PATH - SHEET 3

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5009	C

6/02/2025 12:50:51 PM Default 30043407--5009.dgn

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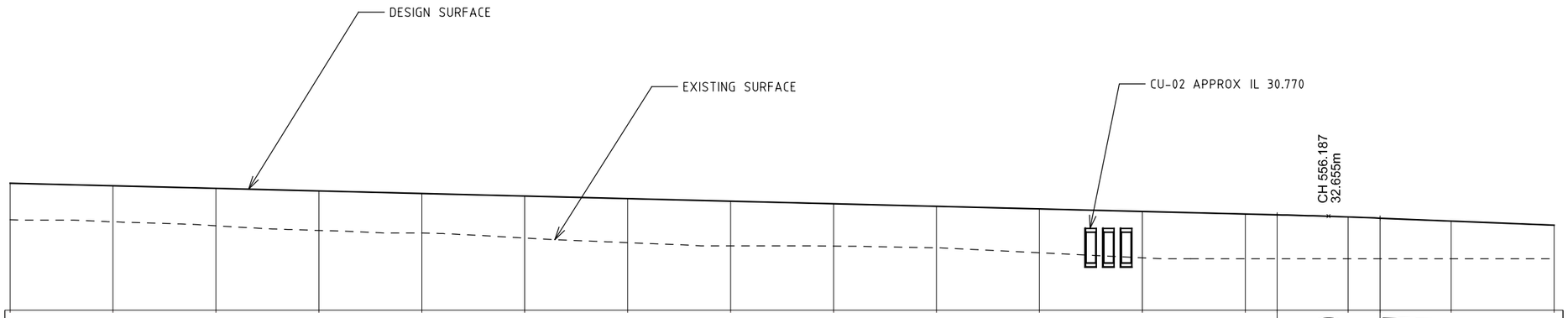


RL 29.000

VERTICAL GEOMETRY

HORIZONTAL GEOMETRY

DESIGN SURFACE LEVELS	33.936	33.836	33.736	33.636	33.536	33.436	33.336	33.236	33.136	33.036	32.936	32.836	32.736	32.705	32.621	32.574	32.462	32.299	
EXISTING SURFACE LEVELS	32.511	32.431	32.278	32.099	31.999	31.806	31.622	31.500	31.492	31.423	31.232	31.037	31.000	31.000	31.000	31.000	31.000	31.000	
CHAINAGE	300.000	320.000	340.000	360.000	380.000	400.000	420.000	440.000	460.000	480.000	500.000	520.000	540.000	546.187	560.000	566.187	580.000	600.000	

LONGITUDINAL SECTION - SUP-01-2

H 1:1000 V 1:200

FINAL

ISSUE	APP'D	DATE	AMENDMENT
C	GC	30.01.25	CHANGES BASED ON LAND TAKE FEEDBACK
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--5010.dgn

Victorian Planning Authority

SCALE OF METRES

HOR 0 10 20

VER 0 2 4

CROSSKELL PSP

VICTORIAN PLANNING AUTHORITY

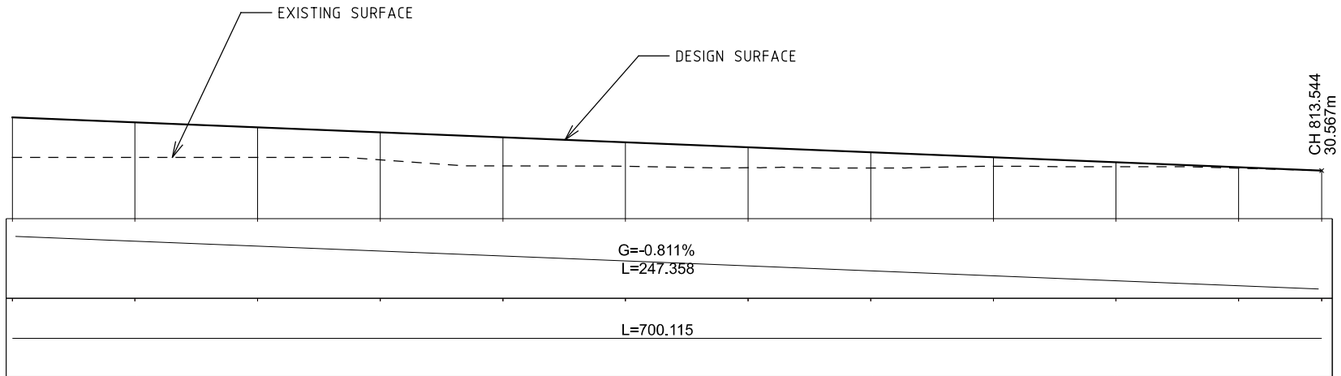
LONGITUDINAL SECTION

SUP-01 - SHARED USE PATH - SHEET 4

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5010	C

3/02/2025 3:54:15 PM Default 30043407--5010.dgn

HD16335 Standard_VR_PDF_SMEC.pltcfg mscol2.tbl V:_Vault\Projects\3004\30043407\110_CADD\CAD\DRAWINGS\30043407--5010.dgn



RL 29.000												
VERTICAL GEOMETRY												
HORIZONTAL GEOMETRY												
DESIGN SURFACE LEVELS	32.299	32.137	31.975	31.813	31.650	31.488	31.326	31.164	31.001	30.839	30.677	30.567
EXISTING SURFACE LEVELS	31.000	31.000	31.000	30.920	30.720	30.707	30.660	30.649	30.705	30.696	30.646	30.567
CHAINAGE	600.000	620.000	640.000	660.000	680.000	700.000	720.000	740.000	760.000	780.000	800.000	813.544

LONGITUDINAL SECTION - SUP-01-2

H 1:1000 V 1:200

FINAL

ISSUE	APP'D	DATE	AMENDMENT
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--5011.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

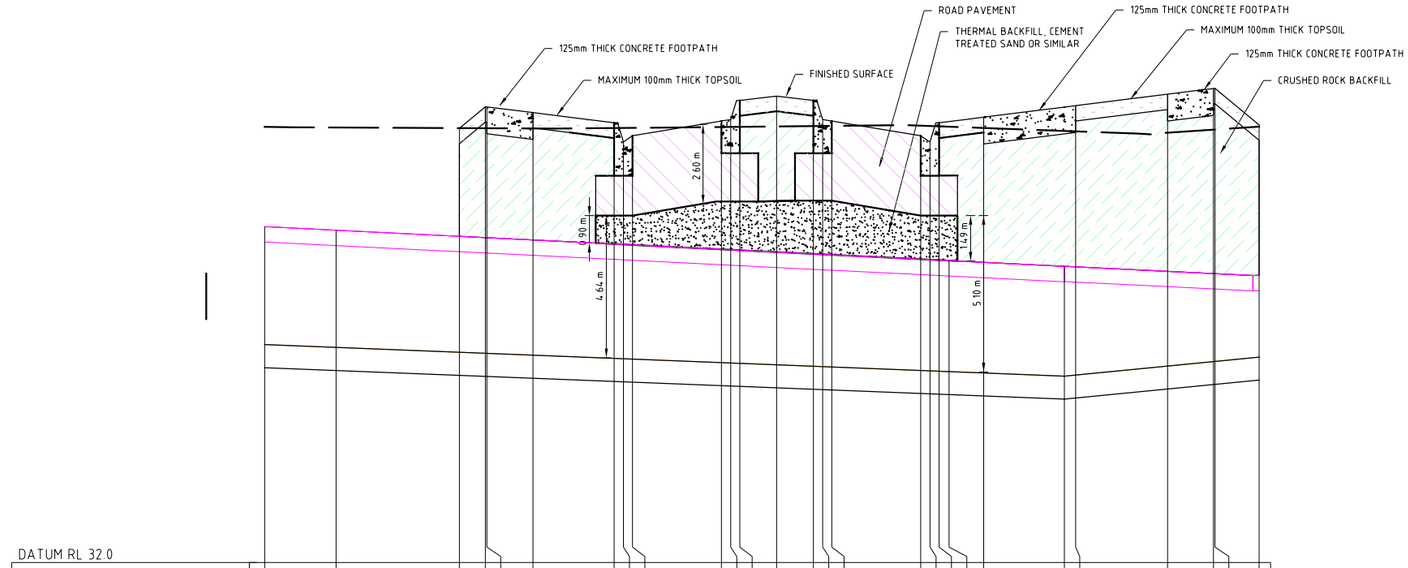
CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

LONGITUDINAL SECTION
SUP-01 - SHARED USE PATH - SHEET 5

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5011	B

3/02/2025 3:54:15 PM Default 30043407--5011.dgn

HD16335 Standard_VR_PDF_SMEC.pltcfg mscol2.tbl V:_Vault\Projects\3004\30043407\110_CADD\CAD\DRAWINGS\30043407--5011.dgn



DATUM RL 32.0

EX 220KV VDP POWER OBVERT	33.421	33.403	33.371	33.364	33.364	33.352	33.331	33.329	33.327	33.304	33.301	33.299	33.290	33.280	33.278	33.275	33.253	33.250	33.248	33.245	33.236	33.216	33.223	33.282	33.311	33.312	33.340
EX VDP OPTICAL FIBRE OBVERT	34.191	34.168	34.128	34.119	34.119	34.104	34.077	34.074	34.072	34.043	34.040	34.037	34.025	34.013	34.010	34.007	33.978	33.975	33.972	33.969	33.958	33.932	33.929	33.899	33.885	33.884	33.873
DESIGN SURFACE			34.833	34.973	34.972	34.934	34.868	34.743	34.783	34.880	34.889	35.014	35.043	35.014	34.889	34.880	34.784	34.744	34.869	34.877	34.905	34.971	34.980	35.055	35.092	35.093	34.854
EXISTING SURFACE	34.842	34.837	34.833	34.832	34.832	34.831	34.834	34.835	34.835	34.841	34.842	34.842	34.845	34.847	34.848	34.848	34.850	34.848	34.846	34.843	34.835	34.816	34.813	34.804	34.823	34.824	34.843
CHAINAGE	257.673	260.000	264.022	264.873	264.923	266.423	269.073	269.373	269.673	272.573	272.873	273.173	274.373	275.573	275.873	276.173	279.073	279.373	279.673	280.000	281.123	283.761	284.123	287.124	288.624	288.674	290.109

RD-01 VDP
CROSSING SECTION A

FINAL

ISSUE	APP'D	DATE	AMENDMENT
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

Member of the Surbana Jurong Group

DESIGNED
A GREENWOOD

APPROVED
J MACKIE

CAT:
PROJ:
FILE: 30043407--5012.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 2 4
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

PAVEMENT AND TYPICAL DETAILS
VDP CROSSING DETAIL

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5012	B

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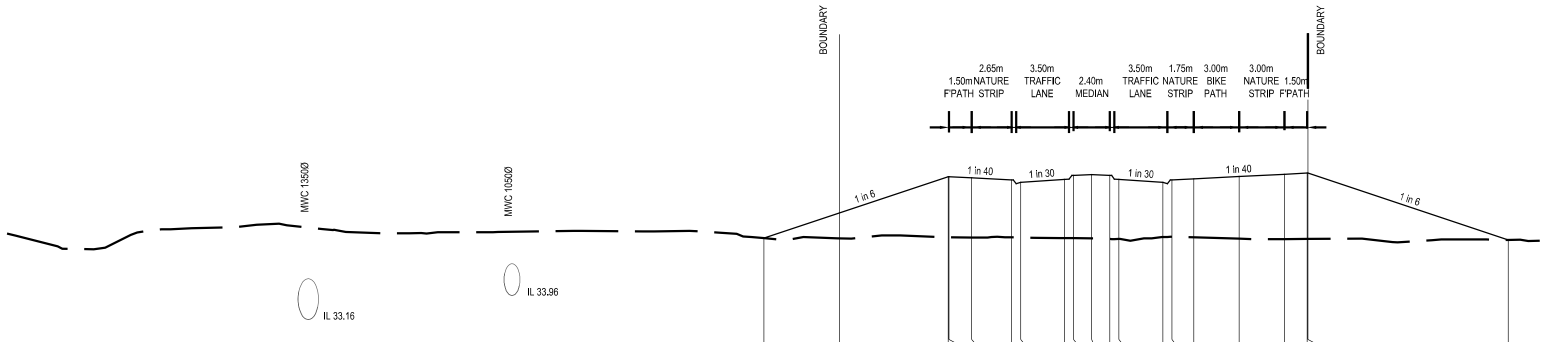
PROPOSED CONSTRUCTION METHODOLOGY

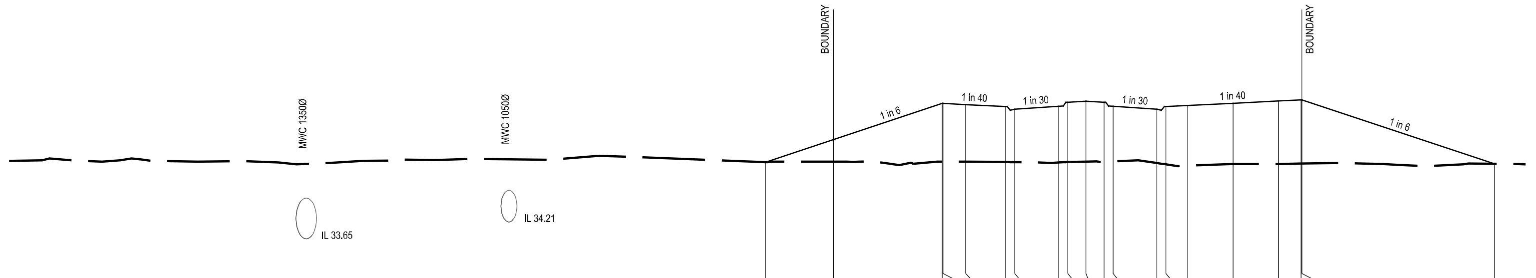
1. EXCAVATE EASEMENT CROSSING DOWN TO EXISTING POLYMERIC PROTECTIVE TILES ABOVE VDP CABLES. EXISTING POLYMERIC TILES AND BACKFILL BELOW TO REMAIN UNTOUCHED
2. IN TRAFFICABLE AREAS BACKFILL WITH CEMENT TREATED SAND OR SIMILAR THERMAL BACKFILL TO ROAD PAVEMENT SUBGRADE LEVEL
3. IN NON TRAFFICABLE AREAS BACKFILL WITH CRUSHED ROCK



DATUM R.L.32.0

DESIGN SURFACE LEVEL			35.853	37.886	37.885	37.848	37.781	37.696	37.793	37.927	37.956	37.927	37.793	37.696	37.781	37.818	37.893	37.968	38.005	38.006	35.796
EXISTING SURFACE LEVEL			35.853	35.878	35.878	35.878	35.879	35.874	35.857	35.853	35.846	35.826	35.829	35.888	35.899	35.878	35.834	35.824	35.827	35.828	35.796
OFFSET	-51.84	-38.36	-21.700	-9.500	-9.450	-7.950	-5.300	-4.700	-1.800	-1.200	0.000	1.200	1.800	4.700	5.300	6.750	9.750	12.750	14.250	14.300	27.560

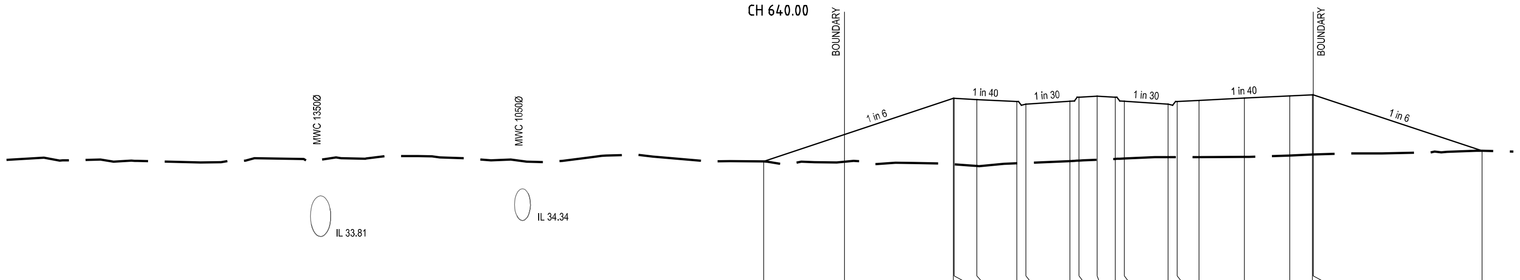
CH 690.00



DATUM R.L.32.0

DESIGN SURFACE LEVEL			36.188	38.136	38.135	38.098	38.031	37.946	38.043	38.177	38.206	38.177	38.043	37.946	38.031	38.068	38.143	38.218	38.255	38.256	36.134
EXISTING SURFACE LEVEL			36.188	36.208	36.208	36.203	36.193	36.191	36.178	36.195	36.208	36.205	36.218	36.162	36.117	36.074	36.126	36.129	36.140	36.141	36.134
OFFSET	-51.59	-38.18	-21.188	-9.500	-9.450	-7.950	-5.300	-4.700	-1.800	-1.200	0.000	1.200	1.800	4.700	5.300	6.750	9.750	12.750	14.250	14.300	27.033

CH 640.00



DATUM R.L.32.0

DESIGN SURFACE LEVEL			36.294	38.386	38.385	38.348	38.281	38.196	38.293	38.427	38.456	38.427	38.293	38.196	38.281	38.318	38.393	38.468	38.505	38.506	36.646
EXISTING SURFACE LEVEL			36.294	36.202	36.200	36.146	36.234	36.247	36.309	36.322	36.351	36.379	36.393	36.439	36.440	36.441	36.444	36.494	36.522	36.523	36.646
OFFSET	-51.35	-38	-22.055	-9.500	-9.450	-7.950	-5.300	-4.700	-1.800	-1.200	0.000	1.200	1.800	4.700	5.300	6.750	9.750	12.750	14.250	14.300	25.460

CH 590.00

RD-01 CROSS SECTIONS
ADJACENT TO MW PIPELINES

FINAL

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B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN
ISSUE	APP'D	DATE	AMENDMENT

GENERAL NOTES

SMEC
Member of the Surbana Jurong Group

DESIGNED
A GREENWOOD

APPROVED
J MACKIE

CAT:
PROJ:
FILE: 30043407--5013.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 5 10
VER 0 2.5 5

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

CROSS SECTION
RD-01 ADJACENT TO MW PIPELINES

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5013	B

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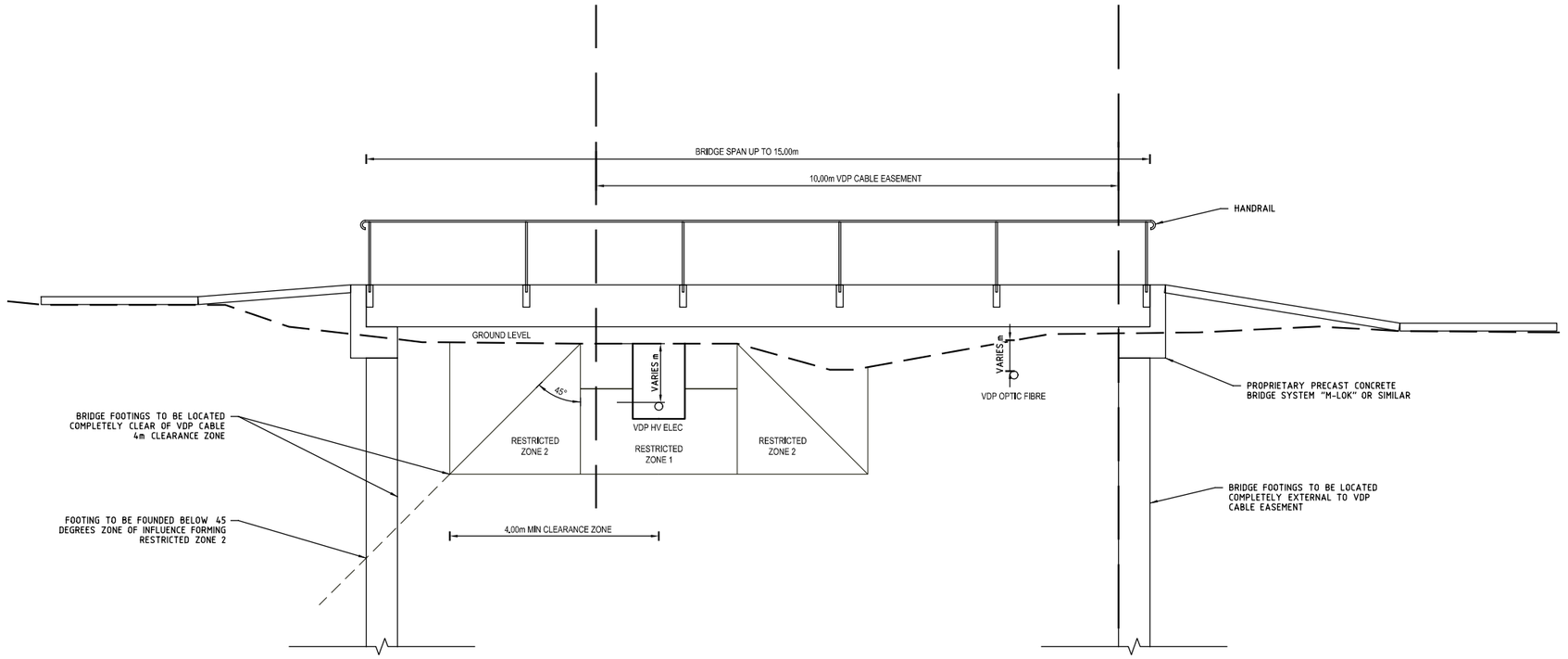
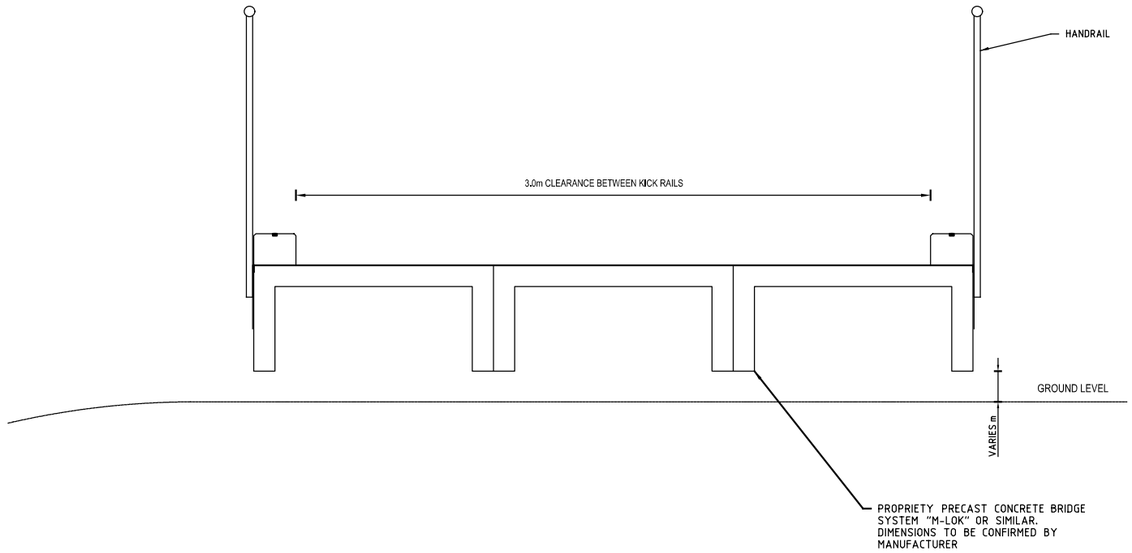


INDICATIVE SHARED PATH TYPICAL SECTIONS

N.T.S



INDICATIVE SHARED PATH ELEVATION

N.T.S

FINAL

ISSUE	APP'D	DATE	AMENDMENT
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.24	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

Victorian Planning Authority

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FILE: 30043407--5014.dgn

SCALE OF METRES

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VICTORIAN PLANNING AUTHORITY

TYPICAL DETAILS (SUP-03, SUP-04, SUP-05)
SHARED USE PATH VDP CROSSING

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5014	B

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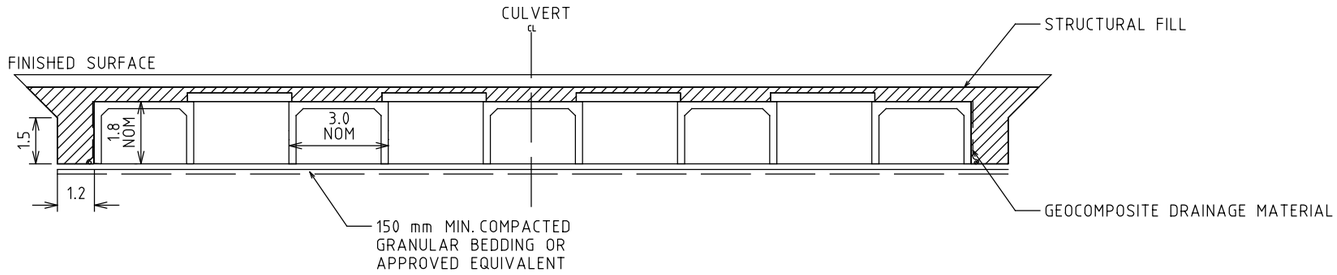
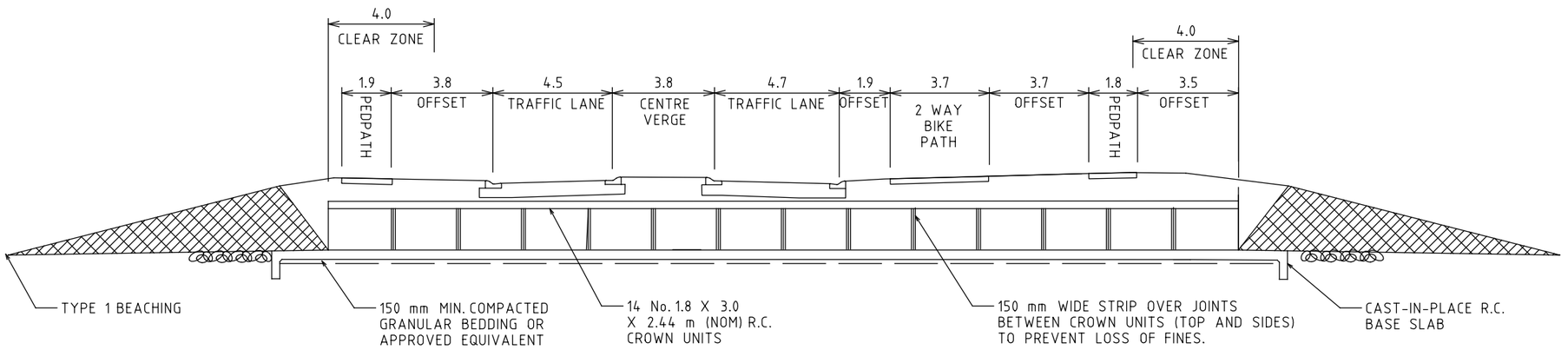


SECTION ELEVATION
CULVERT CU-01 B-B



SIDE ELEVATION
CULVERT CU-01 A-A

FINAL

ISSUE	APP'D	DATE	AMENDMENT
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.25	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD
APPROVED J MACKIE
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FILE: 30043407--5015.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 2 4
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

BOX CULVERT 1800 X 3000
TYPICAL DETAILS (CU-01)

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
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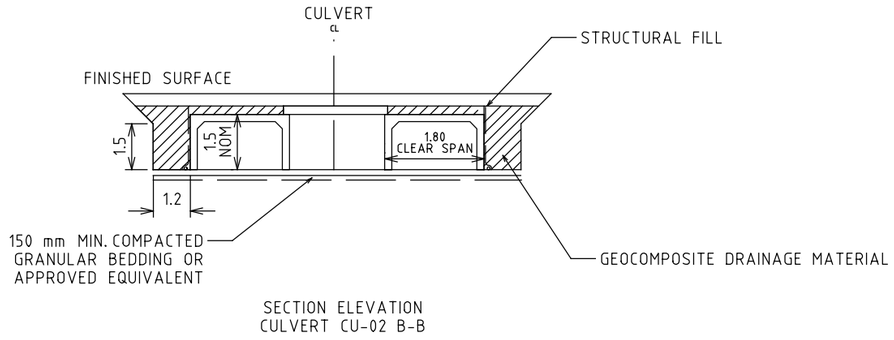
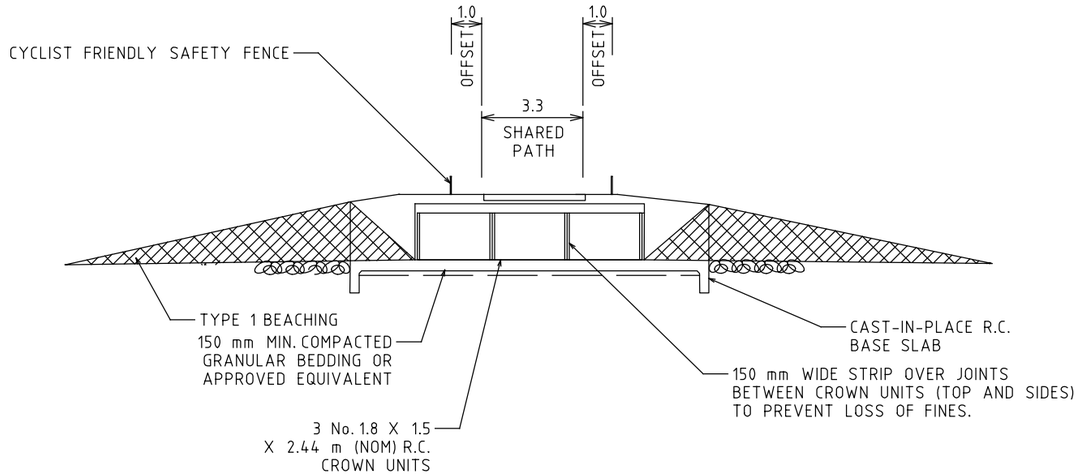


SECTION ELEVATION
CULVERT CU-02 B-B



SIDE ELEVATION
CULVERT CU-02 A-A

FINAL

ISSUE	APP'D	DATE	AMENDMENT
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.26	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:
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Victorian Planning Authority

SCALE OF METRES
HOR 0 2 4
VER 0 2 4

CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

BOX CULVERT 1500 x 1800
TYPICAL DETAILS (CU-02)

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043407	-	-	-5016	B

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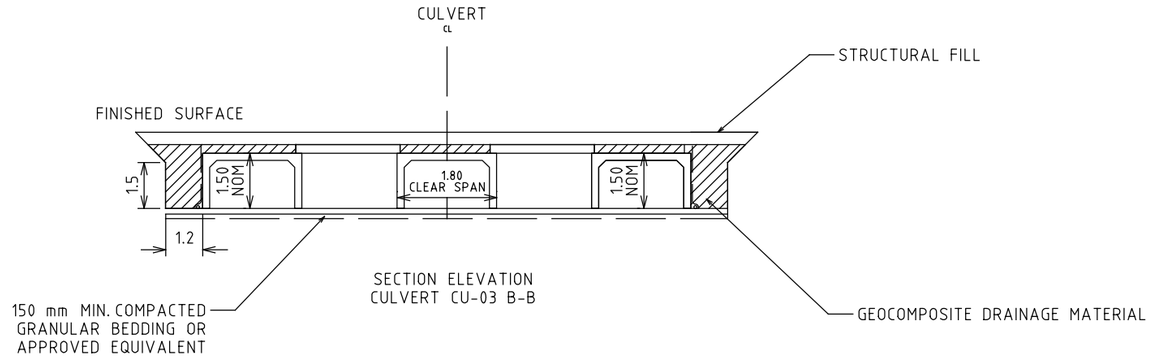

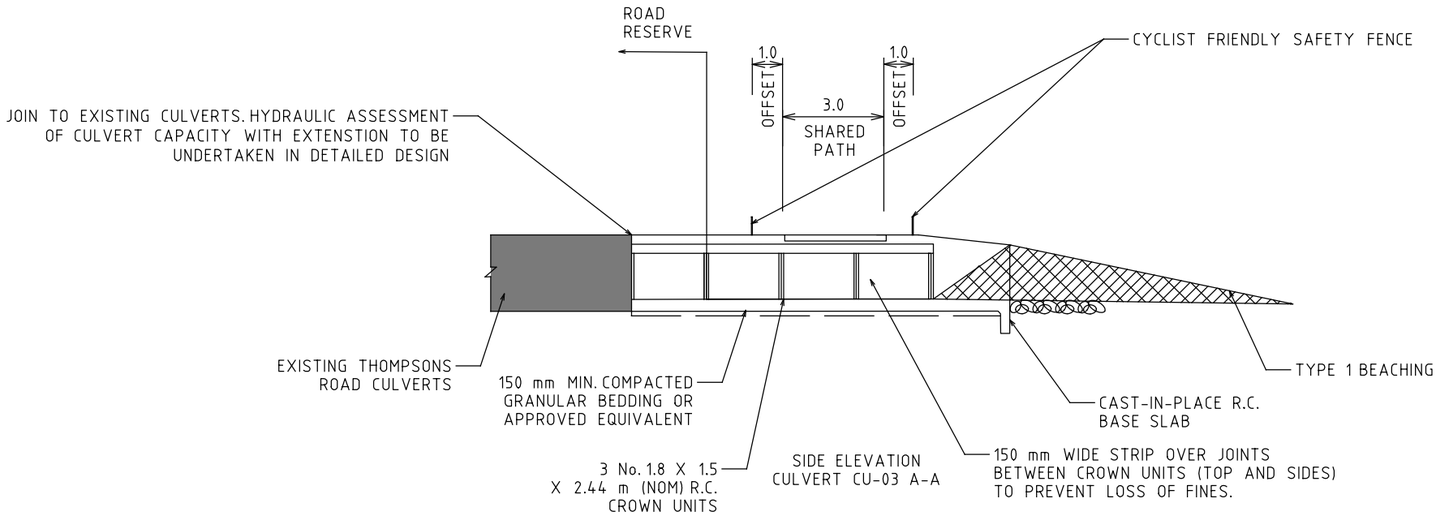

FINAL

ISSUE	APP'D	DATE	AMENDMENT
C	GC	30.01.25	CHANGES BASED ON STAKEHOLDER FEEDBACK
B	JM	26.07.24	CHANGES BASED ON STAKEHOLDER FEEDBACK
A	JM	01.05.27	FINAL CONCEPT DESIGN

GENERAL NOTES

SMEC Member of the Surbana Jurong Group

DESIGNED A GREENWOOD

APPROVED J MACKIE

CAT:

PROJ:

FILE: 30043407--5017.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 2 4
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CROSSKELL PSP
VICTORIAN PLANNING AUTHORITY

BOX CULVERT 1500 x 1800
TYPICAL DETAILS (CU-03)

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
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Appendix B Cost Estimates

Croskell PSP - ICP - Interim Costs Summary

Project	Description	Estimated Cost
IN-01	Thompsons Road & Future Bray Blvd & Connector Road	$ 3,444,067.71
IN-02	Thompsons Road & William Thwaites Blvd & Casey Fields Blvd	$ 3,746,452.38
IN-03	Thompsons Road & Wheelers Park Dr & Connector Road	$ 3,218,867.46
IN-04	Narre-Warren Cranbourne Road & Connector Road	$ 5,141,861.69
IN-05	Berwick Cranbourne Road & Connector Road	$ 3,244,898.94
IN-06	Casey Fields Boulevard & Linsell Boulevard	$ 2,188,002.19
	TOTAL INTERSECTION COST	$ 20,984,150.37
PED-01	Pedestrian Crossing on Narre Warren - Cranbourne Road	$ 427,446.36
PED-02	Pedestrian Crossing on Berwick - Cranbourne Road	$ 429,707.44
	TOTAL PEDESTRIAN CROSSING COST	$ 857,153.80
SUP-01	Shared Use Path - Melbourne Water Pipe Track	$ 3,079,641.28
SUP-02 (N/A)	Shared Use Path along Thompsons Road	$ -
	TOTAL SHARED USE PATH COST	$ 3,079,641.28
CU01	Culvert - Casey Fields Blvd (RD-01) over constructed waterway	$ 2,674,875.23
CU02	Culvert - Shared Use Path (SUP-01) over constructed waterway	$ 418,940.59
CU03 (N/A)	Culvert - Shared Use Path (SUP-02) over constructed waterway	$ -
	TOTAL CULVERT COST	$ 3,093,815.82

RD-01	Casey Fields Boulevard	$ 9,773,280.37
	TOTAL ROAD SECTION COST	$ 9,773,280.37

RD-01(VDP)	Casey Fields Boulevard VDP Crossing	$ 381,751.56
SUP-03	Shared Use Path VDP Crossing	$ 415,512.50
SUP-04	Shared Use Path VDP Crossing	$ 415,512.50
	TOTAL VDP CROSSINGS COST	$ 1,212,776.56

	TOTAL PROJECT COST	$ 39,000,818.21

The estimated construction costs provided in this document have been issued to the Victorian Planning Authority for budgeting purposes only for the Infrastructure Contributions Plan. Rates are based on VPA Benchmark Infrastructure Report 11 April 2019 indexed to 1 July 2025 (based on VPA indexation rates) and Rawlinsons indexed to March 2025 (based on Australian Bureau of Statistics Producer Price Index for Road and Bridge Construction – Victoria). No allowance has been included for utility relocation works, geotechnical testing or WSUD. An allowance for utility services protection has been provided at intersections. Costing for VDP cable crossing items were prepared by Spiire. SMEC Australia assumes no liability for losses incurred through changes to the quantities required to construct the intersection or increases in construction costs. These values are not intended for use in construction pricing and do not constitute a Bill of Quantities.

IN-01 - Thompsons Road & Future Bray Blvd & Connector Road

Intersection - Primary - Connector Intersection (Benchmark Item 7)

Indexation factor for VPA benchmark items (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	8420	m2	4.96	1.32	$ 55,125.75	Sum of pavement, paths and landscape areas
	1.2	Earthworks	2950	m3	40.52	1.32	$ 157,799.26	Excavation depths 735mm for primary arterial pavements, 535mm collector arterial pavements, 200mm traffic island and paths
Road Pavement	2.1	Primary Arterial Pavement	1836	m2	186.26	1.32	$ 451,404.84	
	2.2	Collector Arterial Pavement	2428	m2	112.44	1.32	$ 360,365.70	
	2.3	Subgrade Preparation	957	m2	16.16	1.32	$ 20,419.37	20% of pavement area
	2.3.1	Asphalt overlay on ex. Road	1330	m2	50	1.00	$ 66,500.00	Pavement stepping and resheet
	2.5	Pedestrian Priority Crossing - surface treatment	60	m2	21.5	1.06	$ 1,366.49	Thermoplastic marking of bitumen paving (Rawlinsons 2023)
Concrete Works	3.1	Kerb and Channel	1072	m	174	1.00	$ 186,520.55	
	3.2	Traffic Island	689	m2	84.07	1.32	$ 76,496.07	
	3.3	SUP/footpath	529	m2	73.63	1.32	$ 51,455.10	
	3.4	Cycle Path	474	m2	91.94	1.32	$ 57,525.02	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled	55	m	197.96	1.32	$ 14,371.90	
	4.2	Drainage Pipe 375mm CR Bfilled	180	m	282.96	1.32	$ 67,231.30	
	4.3	Drainage Pipe 450mm CR Bfilled	180	m	334.33	1.32	$ 79,436.81	
	4.4	Drainage Pipe 525mm CR Bfilled	0	m	448.03	1.32	$ -	
	4.5	Drainage - Pits	10	No.	2806.1	1.32	$ 37,040.52	
	4.6	Drainage - Subsoil Drainage	1447	m	43.4	1.32	$ 82,893.28	based on total kerb length + pavement interface length
Traffic	5.1	Traffic Signals	1	Item/ per leg	128786.34	1.32	$ 169,997.97	
Landscape	6.1	Trees	13	No.	363.01	1.32	$ 6,229.25	25% of benchmark item (one leg)
	6.2	Landscaping	2463	m2	25.16	1.32	$ 81,799.19	
	6.3	Topsoil Seeding	2463	m2	8.44	1.32	$ 27,439.79	
Street Lighting	7.1	Street Lighting	1	Item/ per leg	55617.74	1.32	$ 73,415.42	
Utilities	8.1	Allowance for utility services protection	1	Item	30000	1.32	$ 39,600.00	
Miscellaneous	9.1	Linemarking	4738	m2 of pavement	4.09	1.32	$ 25,579.51	
	9.2	Regulatory Signage	4	Item	380.39	1.32	$ 2,008.46	25% of benchmark item (one leg)
	9.4	Landscape Maintenance (intersections)	0.25	Item	88131.43	1.32	$ 29,083.37	25% of benchmark item (one leg)
	9.6	Tactile Pavers (Hazard only)	6	Item	319.78	1.32	$ 2,532.66	25% of benchmark item (one leg)
Other	10.1	Demolition of existing concrete kerbs, footpath, islands + additional removal for pavement stepping.	99	m3	230	1.06	$ 24,154.95	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023)
Delivery	11.1	Council Fees	1	%	3.25	-	$ 73,053.26	
	11.2	VicRoads Fees	1	%	7.97	-	$ 179,149.06	
	11.3	Traffic Management	1	%	10	-	$ 224,779.25	
	11.4	Environmental Management	1	%	0.5	-	$ 11,238.96	
	11.5	Survey/Design	1	%	5	-	$ 112,389.63	
	11.6	Supervision and Project Management	1	%	9	-	$ 202,301.33	
	11.7	Site Establishment	1	%	2.5	-	$ 56,194.81	
	11.8	Contingency	1	%	15	-	$ 337,168.88	
Total		Excluding Delivery					$ 2,247,792.53	
		Including Delivery					$ 3,444,067.71	

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IN-02 - Thompsons Rd & William Thwaites Blvd & Casey Fields Blv

Intersection - Primary - Connector Intersection (Benchmark Item 7)

Indexation factor for VPA benchmark items (July 2024): 1.29

Indexation factor for Rawlinsons items (March 2025): 1.06

Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	9152	m2	4.96	1.32	$ 59,919.97	Sum of pavement, paths and landscape areas
	1.2	Earthworks	2400	m3	40.52	1.32	$ 128,364.95	Excavation depths 735mm for primary arterial pavements, 535mm collector arterial pavements, 200mm traffic island and paths
Road Pavement	2.1	Primary Arterial Pavement	1198	m2	186.26	1.32	$ 294,544.11	
	2.2	Collector Arterial Pavement	2391	m2	112.44	1.32	$ 354,874.13	
	2.3	Subgrade Preparation	720	m2	16.16	1.32	$ 15,349.74	20% of pavement area
	2.3.1	Asphalt overlay on ex. Road	900	m2	50	1.00	$ 45,000.00	Pavement stepping and resheet
	2.5	Pedestrian Priority Crossing - surface treatment	60	m2	21.5	1.06	$ 1,366.49	Thermoplastic marking of bitumen paving (Rawlinsons 2023)
Concrete Works	3.1	Kerb and Channel	967	m	174	1.00	$ 168,258.00	
	3.2	Traffic Island	242	m2	84.07	1.32	$ 26,855.32	
	3.3	SUP/footpath	626	m2	73.63	1.32	$ 60,841.94	
	3.4	Cycle Path	453	m2	91.94	1.32	$ 54,976.44	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled	55	m	197.96	1.32	$ 14,371.90	
	4.2	Drainage Pipe 375mm CR Bfilled	180	m	282.96	1.32	$ 67,231.30	
	4.3	Drainage Pipe 450mm CR Bfilled	180	m	334.33	1.32	$ 79,436.81	
	4.4	Drainage Pipe 525mm CR Bfilled	0	m	448.03	1.32	$ -	
	4.5	Drainage - Pits	11	No.	2806.1	1.32	$ 40,744.57	
	4.6	Drainage - Subsoil Drainage	1222	m	43.4	1.32	$ 70,005.94	Based on total kerb length + pavement interface length
Traffic	5.1	Traffic Signals	1	Item/ per leg	128786.34	1.32	$ 169,997.97	
Landscape	6.1	Trees	13	No.	363.01	1.32	$ 6,229.25	25% of benchmark item (one leg)
	6.2	Landscaping	4242	m2	25.16	1.32	$ 140,881.91	
	6.3	Topsoil Seeding	4242	m2	8.44	1.32	$ 47,259.27	
Street Lighting	7.1	Street Lighting	1	Item/ per leg	55617.74	1.32	$ 73,415.42	
Utilities	8.1	Allowance for utility services protection	1	Item	30000	1.32	$ 39,600.00	
Miscellaneous	9.1	Linemarking	4042	m2 of pavement	4.09	1.32	$ 21,821.95	
	9.2	Regulatory Signage	4	Item	380.39	1.32	$ 2,008.46	25% of benchmark item (one leg)
	9.4	Landscape Maintenance (intersections)	0.25	Item	88131.43	1.32	$ 29,083.37	25% of benchmark item (one leg)
	9.6	Tactile Pavers (Hazard only)	6	Item	319.78	1.32	$ 2,532.66	25% of benchmark item (one leg)
Other	10.1	Demolition of existing concrete kerbs, footpath, islands + additional removal for pavement stepping.	119	m3	230	1.06	$ 28,956.42	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023)
	10.2	Dewatering dam	1737	m2	72.5	1.06	$ 133,399.95	Dewatering - deep system (to reduce water level by over 1000mm) (Rawlinsons 2023)
	10.3	Additional earthworks to fill dam	5211	m3	40.52	1.32	$ 278,717.63	Assumed 3m depth of fill
Delivery	11.1	Council Fees	1	%	3.25	-	$ 79,821.49	
	11.2	VicRoads Fees	1	%	7.29	-	$ 179,045.74	
	11.3	Traffic Management	1	%	10	-	$ 245,604.59	
	11.4	Environmental Management	1	%	0.5	-	$ 12,280.23	
	11.5	Survey/Design	1	%	5	-	$ 122,802.29	
	11.6	Supervision and Project Management	1	%	9	-	$ 221,044.13	
	11.7	Site Establishment	1	%	2.5	-	$ 61,401.15	
	11.8	Contingency	1	%	15	-	$ 368,406.88	
Total		Excluding Delivery					$ 2,456,045.88	
		Including Delivery					$ 3,746,452.38	

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IN-03 - Thompsons Road & Wheelers Park Dr & Connector Road

Intersection - Primary - Connector Intersection (Benchmark Item 7)

Indexation factor for VPA benchmark items (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	8463	m2	4.96	1.32	$ 55,411.38	Sum of pavement, paths and landscape areas
	1.2	Earthworks	2591	m3	40.52	1.32	$ 138,568.77	Excavation depths 735mm for primary arterial pavements, 535mm collector arterial pavements, 200mm traffic island and paths
Road Pavement	2.1	Primary Arterial Pavement	1164	m2	186.26	1.32	$ 286,184.76	
	2.2	Collector Arterial Pavement	2477	m2	112.44	1.32	$ 367,638.32	
	2.3	Subgrade Preparation	751	m2	16.16	1.32	$ 16,018.58	20% of pavement area
	2.3.1	Asphalt overlay on ex. Road	500	m2	50	1.00	$ 25,000.00	Pavement stepping and resheet
	2.5	Pedestrian Priority Crossing - surface treatment	60	m2	21.5	1.06	$ 1,366.49	Thermoplastic marking of bitumen paving (Rawlinsons 2023)
Concrete Works	3.1	Kerb and Channel	932	m	174	1.00	$ 162,198.71	
	3.2	Traffic Island	905	m2	84.07	1.32	$ 100,390.07	
	3.3	SUP/footpath	788	m2	73.63	1.32	$ 76,560.74	
	3.4	Cycle Path	474	m2	91.94	1.32	$ 57,525.02	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled	55	m	197.96	1.32	$ 14,371.90	
	4.2	Drainage Pipe 375mm CR Bfilled	180	m	282.96	1.32	$ 67,231.30	
	4.3	Drainage Pipe 450mm CR Bfilled	270	m	334.33	1.32	$ 119,155.21	
	4.4	Drainage Pipe 525mm CR Bfilled	0	m	448.03	1.32	$ -	
	4.5	Drainage - Pits	13	No.	2806.1	1.32	$ 48,152.68	
	4.6	Drainage - Subsoil Drainage	1202	m	43.4	1.32	$ 68,870.29	Based on total kerb length + pavement interface length
Traffic	5.1	Traffic Signals	1	Item/ per leg	128786.34	1.32	$ 169,997.97	
Landscape	6.1	Trees	13	No.	363.01	1.32	$ 6,229.25	25% of benchmark item (one leg)
	6.2	Landscaping	2656	m2	25.16	1.32	$ 88,208.95	
	6.3	Topsoil Seeding	2656	m2	8.44	1.32	$ 29,589.96	
Street Lighting	7.1	Street Lighting	1	Item/ per leg	55617.74	1.32	$ 73,415.42	
Utilities	8.1	Allowance for utility services protection	1	Item	30000	1.32	$ 39,600.00	
Miscellaneous	9.1	Linemarking	4115	m2 of pavement	4.09	1.32	$ 22,216.06	
	9.2	Regulatory Signage	4	Item	380.39	1.32	$ 2,008.46	25% of benchmark item (one leg)
	9.4	Landscape Maintenance (intersections)	0.25	Item	88131.43	1.32	$ 29,083.37	25% of benchmark item (one leg)
	9.6	Tactile Pavers (Hazard only)	6	Item	319.78	1.32	$ 2,532.66	25% of benchmark item (one leg)
Other	10.1	Demolition of existing concrete kerbs, footpath, islands + additional removal for pavement stepping.	103	m3	230	1.06	$ 25,093.29	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023)
Delivery	11.1	Council Fees	1	%	3.25	-	$ 68,010.14	
	11.2	VicRoads Fees	1	%	8.57	-	$ 179,337.50	
	11.3	Traffic Management	1	%	10	-	$ 209,261.96	
	11.4	Environmental Management	1	%	0.5	-	$ 10,463.10	
	11.5	Survey/Design	1	%	5	-	$ 104,630.98	
	11.6	Supervision and Project Management	1	%	9	-	$ 188,335.76	
	11.7	Site Establishment	1	%	2.5	-	$ 52,315.49	
	11.8	Contingency	1	%	15	-	$ 313,892.94	
Total		Excluding Delivery					$ 2,092,619.60	
		Including Delivery					$ 3,218,867.46	

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IN-04 - Narre-Warren Cranbourne Road & Connector Road
Intersection - Primary - Connector Intersection (Benchmark Item 7)

Indexation factor for VPA benchmark items (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	7199	m2	4.96	1.32	$ 47,135.45	Sum of pavement, paths and landscape areas
	1.2	Earthworks	1986	m3	40.52	1.32	$ 106,201.84	Excavation depths 735mm for primary arterial pavements, 535mm collector arterial pavements, 200mm traffic island and paths
Road Pavement	2.1	Primary Arterial Pavement	625	m2	186.26	1.32	$ 153,664.50	
	2.2	Collector Arterial Pavement	2107	m2	112.44	1.32	$ 312,722.63	
	2.3	Subgrade Preparation	522	m2	16.16	1.32	$ 11,137.39	20% of pavement area
	2.3.1	Asphalt overlay on ex. Road	587	m2	50	1.00	$ 29,350.00	Pavement stepping and resheet
	2.5	Pedestrian Priority Crossing - surface treatment	60	m2	21.5	1.06	$ 1,366.49	Thermoplastic marking of bitumen paving (Rawlinsons 2023)
Concrete Works	3.1	Kerb and Channel	820	m	174	1.00	$ 142,680.00	
	3.2	Traffic Island	700	m2	84.07	1.32	$ 77,717.23	
	3.3	SUP/footpath	889	m2	73.63	1.32	$ 86,403.33	
	3.4	Cycle Path	468	m2	91.94	1.32	$ 56,796.85	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled	60	m	197.96	1.32	$ 15,678.43	
	4.2	Drainage Pipe 375mm CR Bfilled	170	m	282.96	1.32	$ 63,496.22	
	4.3	Drainage Pipe 450mm CR Bfilled	160	m	334.33	1.32	$ 70,610.50	
	4.4	Drainage Pipe 525mm CR Bfilled	0	m	448.03	1.32	$ -	
	4.5	Drainage - Pits	10	No.	2806.1	1.32	$ 37,040.52	
	4.6	Drainage - Subsoil Drainage	985	m	43.4	1.32	$ 56,428.68	based on total kerb length + pavement interface length
Traffic	5.1	Traffic Signals	1	Item/ per leg	128786.34	1.32	$ 169,997.97	
Landscape	6.1	Trees	13	No.	363.01	1.32	$ 6,229.25	25% of benchmark item (one leg)
	6.2	Landscaping	2410	m2	25.16	1.32	$ 80,038.99	
	6.3	Topsoil Seeding	2410	m2	8.44	1.32	$ 26,849.33	
Street Lighting	7.1	Street Lighting	1	Item/ per leg	55617.74	1.32	$ 73,415.42	
Utilities	8.1	Allowance for utility services protection	1	Item	30000	1.32	$ 39,600.00	
	8.2	Relocation of ex. Telstra	1	Item	50000	1.00	$ 50,000.00	Relocation of Telstra conduits within pavement
Miscellaneous	9.1	Linemarking	3200	m2 of pavement	4.09	1.32	$ 17,276.16	
	9.2	Regulatory Signage	4	Item	380.39	1.32	$ 2,008.46	25% of benchmark item (one leg)
	9.4	Landscape Maintenance (intersections)	0.25	Item	88131.43	1.32	$ 29,083.37	25% of benchmark item (one leg)
	9.6	Tactile Pavers (Hazard only)	6	Item	319.78	1.32	$ 2,532.66	25% of benchmark item (one leg)
Other	10.1	Demolition of existing concrete kerbs, footpath, islands + additional removal for pavement stepping.	134	m3	230	1.06	$ 32,647.54	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023).
	10.2	Dewatering dam	18000	m2	15	1.00	$ 270,000.00	Works for full dam site
	10.3	Additional earthworks to fill dam	54000	m3	25	1.00	$ 1,350,000.00	Assumed 3m depth of fill
Delivery	11.1	Council Fees	1	%	3.25	-	$ 111,088.55	
	11.2	VicRoads Fees	1	%	5.18	-	$ 177,058.06	
	11.3	Traffic Management	1	%	10	-	$ 341,810.92	
	11.4	Environmental Management	1	%	0.5	-	$ 17,090.55	
	11.5	Survey/Design	1	%	5	-	$ 170,905.46	
	11.6	Supervision and Project Management	1	%	9	-	$ 307,629.83	
	11.7	Site Establishment	1	%	2.5	-	$ 85,452.73	
	10.8	Contingency	1	%	15	-	$ 512,716.38	
Total		Excluding Delivery					$ 3,418,109.21	
		Including Delivery					$ 5,141,861.69	

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IN-05 - Berwick Cranbourne Road & Connector Road
Intersection - Primary - Connector Intersection (Benchmark Item 7)

Indexation factor for VPA benchmark items (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	8015	m2	4.96	1.32	$ 52,478.13	Sum of pavement, paths and landscape areas
	1.2	Earthworks	2593	m3	40.52	1.32	$ 138,669.69	Excavation depths 735mm for primary arterial pavements, 535mm collector arterial pavements, 200mm traffic island and paths
Road Pavement	2.1	Primary Arterial Pavement	1289	m2	186.26	1.32	$ 316,917.66	
	2.2	Collector Arterial Pavement	2426	m2	112.44	1.32	$ 360,068.86	
	2.3	Subgrade Preparation	776	m2	16.16	1.32	$ 16,559.91	20% of pavement area
	2.3.1	Asphalt overlay on ex. Road	1200	m2	50	1.00	$ 60,000.00	Pavement stepping and resheet
	2.5	Pedestrian Priority Crossing - surface treatment	60	m2	21.5	1.06	$ 1,366.49	Thermoplastic marking of bitumen paving (Rawlinsons 2023)
Concrete Works	3.1	Kerb and Channel	1101	m	174	1.00	$ 191,582.70	
	3.2	Traffic Island	671	m2	84.07	1.32	$ 74,501.85	
	3.3	SUP/footpath	720	m2	73.63	1.32	$ 69,977.95	
	3.4	Cycle Path	474	m2	91.94	1.32	$ 57,525.02	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled	55	m	197.96	1.32	$ 14,371.90	
	4.2	Drainage Pipe 375mm CR Bfilled	190	m	282.96	1.32	$ 70,966.37	
	4.3	Drainage Pipe 450mm CR Bfilled	160	m	334.33	1.32	$ 70,610.50	
	4.4	Drainage Pipe 525mm CR Bfilled	0	m	448.03	1.32	$ -	
	4.5	Drainage - Pits	12	No.	2806.1	1.32	$ 44,448.62	
	4.6	Drainage - Subsoil Drainage	1521	m	43.4	1.32	$ 87,137.91	based on total kerb length + pavement interface length
Traffic	5.1	Traffic Signals	1	Item/ per leg	128786.34	1.32	$ 169,997.97	
Landscape	6.1	Trees	13	No.	363.01	1.32	$ 6,229.25	25% of benchmark item (one leg)
	6.2	Landscaping	2435	m2	25.16	1.32	$ 80,869.27	
	6.3	Topsoil Seeding	2435	m2	8.44	1.32	$ 27,127.85	
Street Lighting	7.1	Street Lighting	1	Item/ per leg	55617.74	1.32	$ 73,415.42	
Utilities	8.1	Allowance for utility services protection	1	Item	30000	1.32	$ 39,600.00	
Miscellaneous	9.1	Linemarking	4189	m2 of pavement	4.09	1.32	$ 22,615.57	
	9.2	Regulatory Signage	4	Item	380.39	1.32	$ 2,008.46	25% of benchmark item (one leg)
	9.4	Landscape Maintenance (intersections)	0.25	Item	88131.43	1.32	$ 29,083.37	25% of benchmark item (one leg)
	9.6	Tactile Pavers (Hazard only)	6	Item	319.78	1.32	$ 2,532.66	25% of benchmark item (one leg)
Other	10.1	Demolition of existing concrete kerbs, footpath, islands + additional removal for pavement stepping.	123	m3	230	1.06	$ 29,977.26	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023)
Delivery	11.1	Council Fees	1	%	3.25	-	$ 68,595.82	
	11.2	VicRoads Fees	1	%	8.49	-	$ 179,193.39	
	11.3	Traffic Management	1	%	10	-	$ 211,064.07	
	11.4	Environmental Management	1	%	0.5	-	$ 10,553.20	
	11.5	Survey/Design	1	%	5	-	$ 105,532.03	
	11.6	Supervision and Project Management	1	%	9	-	$ 189,957.66	
	11.7	Site Establishment	1	%	2.5	-	$ 52,766.02	
	11.8	Contingency	1	%	15	-	$ 316,596.10	
Total		Excluding Delivery					$ 2,110,640.65	
		Including Delivery					$ 3,244,898.94	

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IN-06 - Casey Fields Boulevard & Linsell Boulevard

Intersection - Secondary - Connector Intersection (Benchmark Item 9)

Indexation factor for VPA benchmark items (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	5937	m2	4.96	1.32	$ 38,872.97	Sum of pavement, paths and landscape areas
	1.2	Earthworks	1714	m3	40.52	1.32	$ 91,689.27	Excavation depths 635mm for secondary arterial pavements, 535mm collector arterial pavements, 200mm traffic island and paths
Road Pavement	2.1	Secondary Arterial Pavement	737	m2	133.78	1.32	$ 130,078.94	
	2.2	Collector Arterial Pavement	1715	m2	112.44	1.32	$ 254,574.40	
	2.3	Subgrade Preparation	490	m2	16.16	1.32	$ 10,456.00	20% of pavement area
	2.3.1	Asphalt overlay on ex. Road	650	m2	50	1.00	$ 32,500.00	Pavement stepping and resheet
	2.4	Raised Priority Crossing - asphalt	60	m2	78	1.06	$ 4,957.51	Hot bituminous concrete including tack coat: 50mm thick multiplied by 3 (Rawlinsons 2023)
	2.5	Raised Priority Crossing - surface treatment	60	m2	21.5	1.06	$ 1,366.49	Thermoplastic marking of bitumen paving (Rawlinsons 2023)
Concrete Works	3.1	Kerb and Channel	726	m	174	1.00	$ 126,324.00	
	3.2	Traffic Island	934	m2	84.07	1.32	$ 103,641.82	
	3.3	SUP/footpath	401	m2	73.63	1.32	$ 39,008.12	
	3.4	Cycle Path	309	m2	91.94	1.32	$ 37,500.49	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled	53	m	197.96	1.32	$ 13,849.28	25% of benchmark item (one leg)
	4.2	Drainage Pipe 375mm CR Bfilled	120	m	282.96	1.32	$ 44,820.86	25% of benchmark item (one leg)
	4.3	Drainage Pipe 450mm CR Bfilled	185	m	334.33	1.32	$ 81,643.39	25% of benchmark item (one leg)
	4.4	Drainage Pipe 525mm CR Bfilled	0	m	448.03	1.32	$ -	25% of benchmark item (one leg)
	4.5	Drainage - Pits	10	No.	2806.1	1.32	$ 37,040.52	25% of benchmark item (one leg)
	4.6	Drainage - Subsoil Drainage	916	m	43.4	1.32	$ 52,475.81	based on total kerb length + pavement interface length
Traffic	5.1	Traffic Signals	1	Item/ per leg	128786.34	1.32	$ 169,997.97	
Landscape	6.1	Trees	11	No.	363.01	1.32	$ 5,270.91	25% of benchmark item (one leg)
	6.2	Landscaping	1841	m2	25.16	1.32	$ 61,148.79	
	6.3	Topsoil Seeding	1841	m2	8.44	1.32	$ 20,512.55	
Street Lighting	7.1	Street Lighting	1	Item/ per leg	55617.74	1.32	$ 73,415.42	
Utilities	8.1	Allowance for utility services protection	1	Item	30000	1.32	$ 39,600.00	
Miscellaneous	9.1	Linemarking	2761	m2 of pavement	4.09	1.32	$ 14,905.21	
	9.2	Regulatory Signage	3	Item	380.39	1.32	$ 1,506.34	25% of benchmark item (one leg)
	9.4	Landscape Maintenance (intersections)	0.25	Item	88131.43	1.32	$ 29,083.37	25% of benchmark item (one leg)
	9.6	Tactile Pavers (Hazard only)	6	Item	319.78	1.32	$ 2,532.66	25% of benchmark item (one leg)
Other	10.1	Demolition of existing concrete kerbs, footpath, islands + additional removal for pavement stepping.	124	m3	230	1.06	$ 30,255.01	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023)
Delivery	11.1	Council Fees		%	3.25	-	$ 50,343.41	
	11.2	VicRoads Fees	1	%	1	-	$ 15,490.28	
	11.3	Traffic Management	1	%	5	-	$ 77,451.40	
	114	Environmental Management	1	%	0.5	-	$ 7,745.14	
	11.5	Survey/Design	1	%	5	-	$ 77,451.40	
	11.6	Supervision and Project Management	1	%	9	-	$ 139,412.53	
	11.7	Site Establishment	1	%	2.5	-	$ 38,725.70	
	11.8	Contingency	1	%	15	-	$ 232,354.21	
Total		Excluding Delivery					$ 1,549,028.10	
		Including Delivery					$ 2,188,002.19	

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PED-01 - Pedestrian Crossing on Narre Warren - Cranbourne Road

Pedestrian Operated Signals

Indexation factor for VPA benchmark items (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	950	m2	4.96	1.32	$ 6,219.84	Based on project area
	1.2	Earthworks	15	m3	40.52	1.32	$ 823.69	Excavation depth 200mm for paths
Road Pavement	2.1	Primary Arterial Pavement	0	m2	186.26	1.32	$ -	
	2.2	Collector Arterial Pavement	0	m2	112.44	1.32	$ -	
	2.3	Subgrade Preparation	0	m2	16.16	1.32	$ -	
Concrete Works	3.1	Kerb and Channel	24	m	174	1.00	$ 4,176.00	
	3.2	Traffic Island	0	m2	84.07	1.32	$ -	
	3.3	SUP/footpath	77	m2	73.63	1.32	$ 7,483.75	
	3.4	Cycle Path	0	m2	91.94	1.32	$ -	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled	0	m	197.96	1.32	$ -	
	4.2	Drainage Pipe 375mm CR Bfilled	0	m	282.96	1.32	$ -	
	4.3	Drainage Pipe 450mm CR Bfilled	0	m	334.33	1.32	$ -	
	4.4	Drainage Pipe 525mm CR Bfilled	0	m	448.03	1.32	$ -	
	4.5	Drainage - Pits	0	No.	2806.1	1.32	$ -	
	4.6	Drainage - Subsoil Drainage	0	m	43.4	1.32	$ -	
Traffic	5.1	Traffic Signals	1	Item/ per leg	128786.34	1.32	$ 169,997.97	Based on the cost of one leg of a primary signalised intersection
Landscape	6.1	Trees	0	No. m2	363.01	1.32	$ -	
	6.2	Landscaping	154	m2	25.16	1.32	$ 5,114.52	1m wide on both sides of path
	6.3	Topsoil Seeding	154	m2	8.44	1.32	$ 1,715.68	1m wide on both sides of path
Street Lighting	7.1	Street Lighting	1	Item/ per leg	55617.74	1.32	$ 73,415.42	
Miscellaneous	8.1	Linemarking	300	m2 of pavement	4.09	1.32	$ 1,619.64	
	8.2	Regulatory Signage	0	Item	380.39	1.32	$ -	
	8.3	Landscape Maintenance (intersections)	0.1	Item	88131.43	1.32	$ 11,633.35	10% of benchmark item 7 landscape maintenance
	8.4	Tactile Pavers (Hazard only)	4	Item	319.78	1.32	$ 1,688.44	
	8.5	Pedestrian fencing	12	m	102	1.06	$ 1,296.58	1200mm high fence of galvanised welded mesh roll top panels and tubular posts (Rawlinsons 2023)
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	5.76	m3	230	1.06	$ 1,403.36	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023)
Delivery	10.1	Council Fees	1	%	3.25	-	$ 9,314.12	
	10.2	VicRoads Fees	1	%	8.9	-	$ 25,506.35	
	10.3	Traffic Management	1	%	5	-	$ 14,329.41	
	10.4	Environmental Management	1	%	0.5	-	$ 1,432.94	
	10.5	Survey/Design	1	%	5	-	$ 14,329.41	
	10.6	Supervision and Project Management	1	%	9	-	$ 25,792.94	
	10.7	Site Establishment	1	%	2.5	-	$ 7,164.71	
	10.8	Contingency	1	%	15	-	$ 42,988.24	
Total		Excluding Delivery					$ 286,588.24	
		Including Delivery					$ 427,446.36	

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PED-02 - Pedestrian Crossing on Berwick - Cranbourne Road
Pedestrian Operated Signals

Indexation factor for VPA benchmark items (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	950	m2	4.96	1.32	$ 6,219.84	Based on project area
	1.2	Earthworks	16	m3	40.52	1.32	$ 834.39	Excavation depth 200mm for paths
Road Pavement	2.1	Primary Arterial Pavement	0	m2	186.26	1.32	$ -	
	2.2	Collector Arterial Pavement	0	m2	112.44	1.32	$ -	
	2.3	Subgrade Preparation	0	m2	16.16	1.32	$ -	
Concrete Works	3.1	Kerb and Channel	24	m	174	1.00	$ 4,176.00	
	3.2	Traffic Island	0	m2	84.07	1.32	$ -	
	3.3	SUP/footpath	78	m2	73.63	1.32	$ 7,580.94	
	3.4	Cycle Path	0	m2	91.94	1.32	$ -	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled	0	m	197.96	1.32	$ -	
	4.2	Drainage Pipe 375mm CR Bfilled	0	m	282.96	1.32	$ -	
	4.3	Drainage Pipe 450mm CR Bfilled	0	m	334.33	1.32	$ -	
	4.4	Drainage Pipe 525mm CR Bfilled	0	m	448.03	1.32	$ -	
	4.5	Drainage - Pits	0	No.	2806.1	1.32	$ -	
	4.6	Drainage - Subsoil Drainage	0	m	43.4	1.32	$ -	
Traffic	5.1	Traffic Signals	1	Item/ per leg	128786.34	1.32	$ 169,997.97	Based on the cost of one leg of a primary signalised intersection
Landscape	6.1	Trees	0	No. m2	363.01	1.32	$ -	
	6.2	Landscaping	156	m2	25.16	1.32	$ 5,180.95	1m wide on both sides of path
	6.3	Topsoil Seeding	156	m2	8.44	1.32	$ 1,737.96	1m wide on both sides of path
Street Lighting	7.1	Street Lighting	1	Item/ per leg	55617.74	1.32	$ 73,415.42	
Miscellaneous	8.1	Linemarking	300	m2 of pavement	4.09	1.32	$ 1,619.64	
	8.2	Regulatory Signage	0	Item	380.39	1.32	$ -	
	8.3	Landscape Maintenance (intersections)	0.1	Item	88131.43	1.32	$ 11,633.35	10% of benchmark item 7 landscape maintenance
	8.4	Tactile Pavers (Hazard only)	4	Item	319.78	1.32	$ 1,688.44	
	8.5	Pedestrian fencing	26	m	102	1.06	$ 2,809.26	1200mm high fence of galvanised welded mesh roll top panels and tubular posts (Rawlinsons 2023)
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	5.76	m3	230	1.06	$ 1,403.36	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023)
Delivery	10.1	Council Fees	1	%	3.25	-	$ 9,369.67	
	10.2	VicRoads Fees	1	%	8.8	-	$ 25,370.18	
	10.3	Traffic Management	1	%	5	-	$ 14,414.88	
	10.4	Environmental Management	1	%	0.5	-	$ 1,441.49	
	10.5	Survey/Design	1	%	5	-	$ 14,414.88	
	10.6	Supervision and Project Management	1	%	9	-	$ 25,946.78	
	10.7	Site Establishment	1	%	2.5	-	$ 7,207.44	
	10.8	Contingency	1	%	15	-	$ 43,244.63	
Total		Excluding Delivery					$ 288,297.51	
		Including Delivery					$ 429,707.44	

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SUP-01 - Shared Use Path - Melbourne Water Pipe Track (1104m)

Shared Use Path

Indexation factor for VPA benchmark items (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	16910	m2	4.96	1.32	$ 110,713.15	Sum of pavement, paths and landscape areas
	1.2	Earthworks	19001	m3	40.52	1.32	$ 1,016,285.62	Fill volume from 12d minus 200mm depth to subgrade
Road Pavement	2.1	Primary Arterial Pavement	0	m2	186.26	1.32	$ -	
	2.2	Collector Arterial Pavement	0	m2	112.44	1.32	$ -	
	2.3	Subgrade Preparation	0	m2	16.16	1.32	$ -	
Concrete Works	3.1	Kerb and Channel	0	m	174	1.32	$ -	
	3.2	Traffic Island	0	m2	84.07	1.32	$ -	
	3.3	SUP/footpath	3315	m2	73.63	1.32	$ 322,190.15	
	3.4	Cycle Path	0	m2	91.94	1.32	$ -	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled	0	m	197.96	1.32	$ -	No allowance for drainage
	4.2	Drainage Pipe 375mm CR Bfilled	0	m	282.96	1.32	$ -	
	4.3	Drainage Pipe 450mm CR Bfilled	0	m	334.33	1.32	$ -	
	4.4	Drainage Pipe 525mm CR Bfilled	0	m	448.03	1.32	$ -	
	4.5	Drainage - Pits	0	No.	2806.1	1.32	$ -	
	4.6	Drainage - Subsoil Drainage	0	m	43.4	1.32	$ -	
Traffic	5.1	Traffic Signals	0	Item/ per leg	128786.34	1.32	$ -	
Landscape	6.1	Trees	110	No.	363.01	1.32	$ 52,900.72	Trees at 20m spacing on both sides
	6.2	Landscaping	13595	m2	25.16	1.32	$ 451,506.26	Area of fill batters
	6.3	Topsoil Seeding	13595	m2	8.44	1.32	$ 151,459.18	Area of fill batters
Street Lighting	7.1	Street Lighting	0	Item/ per leg	55617.74	1.32	$ -	No allowance for lighting
Miscellaneous	8.1	Linemarking	3315	m2 of pavement	4.09	1.32	$ 17,897.02	
	8.2	Regulatory Signage	8	Item	380.39	1.32	$ 4,016.92	1 sign at each path start/end
	8.4	Landscape Maintenance (road)	13595	m2	2.9	1.32	$ 52,041.66	
	8.6	Tactile Pavers (Hazard only)	3	Item	319.78	1.32	$ 1,266.33	
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	0	m3	230	1.06	$ -	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023)
Delivery	10.1	Council Fees	1	%	3.25	-	$ 70,859.00	
	10.2	VicRoads Fees	1	%	1	-	$ 21,802.77	
	10.3	Traffic Management	1	%	5	-	$ 109,013.85	
	10.4	Environmental Management	1	%	0.5	-	$ 10,901.39	
	10.5	Survey/Design	1	%	5	-	$ 109,013.85	
	10.6	Supervision and Project Management	1	%	9	-	$ 196,224.93	
	10.7	Site Establishment	1	%	2.5	-	$ 54,506.93	
	10.8	Contingency	1	%	15	-	$ 327,041.55	
Total		Excluding Delivery					$ 2,180,277.02	
		Including Delivery					$ 3,079,641.28	

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SUP-02 (N/A) - Shared Use Path along Thompsons Road (469m)

Shared Use Path

Item was removed from the ICP on recommendation from the Draft Casey Amendment C296case Referral 11 – Croskell (Employment) Precinct Structure Plan and Infrastructure Contributions Plan VPA Projects Standing Advisory Committee Report May 2025

Indexation factor for VPA benchmark items (July 2024): 1.29

Indexation factor for Rawlinsons items (March 2025): 1.06

Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation		m2	4.96	1.32	$ -	Sum of pavement, paths and landscape areas
	1.2	Earthworks		m3	40.52	1.32	$ -	Allowance for cut/fill based on path area multiplied by 0.5m depth
Road Pavement	2.1	Primary Arterial Pavement		m2	186.26	1.32	$ -	
	2.2	Collector Arterial Pavement		m2	112.44	1.32	$ -	
	2.3	Subgrade Preparation		m2	16.16	1.32	$ -	
Concrete Works	3.1	Kerb and Channel		m	174	1.32	$ -	
	3.2	Traffic Island		m2	84.07	1.32	$ -	
	3.3	SUP/footpath		m2	73.63	1.32	$ -	
	3.4	Cycle Path		m2	91.94	1.32	$ -	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled		m	197.96	1.32	$ -	No allowance for drainage
	4.2	Drainage Pipe 375mm CR Bfilled		m	282.96	1.32	$ -	
	4.3	Drainage Pipe 450mm CR Bfilled		m	334.33	1.32	$ -	
	4.4	Drainage Pipe 525mm CR Bfilled		m	448.03	1.32	$ -	
	4.5	Drainage - Pits		No.	2806.1	1.32	$ -	
	4.6	Drainage - Subsoil Drainage		m	43.4	1.32	$ -	
Traffic	5.1	Traffic Signals		Item/ per leg	128786.34	1.32	$ -	
Landscape	6.1	Trees		No.	363.01	1.32	$ -	Trees at 20m spacing on both sides
	6.2	Landscaping		m2	25.16	1.32	$ -	Area of fill batters
	6.3	Topsoil Seeding		m2	8.44	1.32	$ -	Area of fill batters
Street Lighting	7.1	Street Lighting		Item/ per leg	55617.74	1.32	$ -	No allowance for lighting
Miscellaneous	8.1	Linemarking		m2 of pavement	4.09	1.32	$ -	
	8.2	Regulatory Signage		Item	380.39	1.32	$ -	1 sign at each path start/end
	8.4	Landscape Maintenance (road)		m2	2.9	1.32	$ -	
	8.6	Tactile Pavers (Hazard only)		Item	319.78	1.32	$ -	
Other	9.1	Demolition of existing concrete kerbs, footpath, islands		m3	230	1.06	$ -	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023)
Delivery	10.1	Council Fees	1	%	3.25	-	$ -	
	10.2	VicRoads Fees	1	%	1	-	$ -	
	10.3	Traffic Management	1	%	5	-	$ -	
	10.4	Environmental Management	1	%	0.5	-	$ -	
	10.5	Survey/Design	1	%	5	-	$ -	
	10.6	Supervision and Project Management	1	%	9	-	$ -	
	10.7	Site Establishment	1	%	2.5	-	$ -	
	10.8	Contingency	1	%	15	-	$ -	
Total		Excluding Delivery					$ -	
		Including Delivery					$ -	

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SUP-03

Shared Use Path VDP Crossing

Indexation factor for cost items provided by Spiire: 1.00

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Preliminary Site & Earthworks	0.1	Service Proving	1	Item	25000	1	$ 25,000.00	Service proving required prior to construction
	0.2	Site Preparation	180	m2	5	1	$ 900.00	26.1m (including approaches) x 7.1 (corridor) = 185 m2
Precast Shared Use Bridge	1.1	15m precast beam (supply only)	3	No.	16500	1.00	$ 49,500.00	
	1.2	Headstock Unit	2	m2	10300	1.00	$ 20,600.00	
	1.3	Hardware	1	No.	2500	1.00	$ 2,500.00	
	1.4	Piles (10m)	6	m2	6000	1.00	$ 36,000.00	
	1.5	Handrail	30	No.	350	1.00	$ 10,500.00	
	1.6	Delivery to Site	1	m2	20000	1.00	$ 20,000.00	
	1.7	Installation	1	No.	100000	1.00	$ 100,000.00	
Ancillaries	2.1	Structural Design Piles/footings	1	m2	10000	1.00	$ 10,000.00	
	2.2	Geotechnical Investigations	1	Item	10000	1.00	$ 10,000.00	
Delivery	3.1	Council Fees	1	Item	10000	1.00	$ 10,000.00	
	3.2	Environmental Management	1	%	3.25	-	$ 8,612.50	
	3.3	Surveying and design	1	%	0.5	-	$ 1,325.00	
	3.4	Supervision and project management	1	%	10	-	$ 26,500.00	
	3.5	Site establishment	1	%	18	-	$ 47,700.00	
	3.8	Contingency	1	%	2.5	-	$ 6,625.00	
Total		Excluding Delivery and Ancillaries			15	-	$ 39,750.00	
		Including Delivery and Ancillaries					$ 265,000.00	
							$ 415,512.50	

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SUP-04
Shared Use Path VDP Crossing

Indexation factor for cost items provided by Spiire: 1.00

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Preliminary Site & Earthworks	0.1	Service Proving	1	Item	25000	1	$ 25,000.00	Service proving required prior to construction
	0.2	Site Preparation	180	m2	5	1	$ 900.00	26.1m (including approaches) x 7.1 (corridor) = 185 m2
Precast Shared Use Bridge	1.1	15m precast beam (supply only)	3	No.	16500	1.00	$ 49,500.00	
	1.2	Headstock Unit	2	No.	10300	1.00	$ 20,600.00	
	1.3	Hardware	1	No.	2500	1.00	$ 2,500.00	
	1.4	Piles (10m)	6	No.	6000	1.00	$ 36,000.00	
	1.5	Handrail	30	m2	350	1.00	$ 10,500.00	
	1.6	Delivery to Site	1	No.	20000	1.00	$ 20,000.00	
	1.7	Installation	1	No.	100000	1.00	$ 100,000.00	
Ancillaries	2.1	Structural Design Piles/footings	1	m3	10000	1.00	$ 10,000.00	
	2.2	Geotechnical Investigations	1	Item	10000	1.00	$ 10,000.00	
Delivery	3.1	Council Fees	1	%	3.25	-	$ 8,612.50	
	3.2	Environmental Management	1	%	0.5	-	$ 1,325.00	
	3.3	Surveying and design	1	%	10	-	$ 26,500.00	
	3.4	Supervision and project management	1	%	18	-	$ 47,700.00	
	3.5	Site establishment	1	%	2.5	-	$ 6,625.00	
	3.8	Contingency	1	%	15	-	$ 39,750.00	
Total		Excluding Delivery and Ancillaries					$ 265,000.00	
		Including Delivery and Ancillaries					$ 415,512.50	

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RD-01 - Casey Fields Boulevard (905m long)
Road - Connector Boulevard - 800m (Benchmark Item 3)

Indexation factor for VPA benchmark items (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quanity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	37198	m2	4.96	1.32	$ 243,540.89	Sum of pavement, paths and landscape areas
	1.2	Earthworks	31498	m3	40.52	1.32	$ 1,684,694.73	Cut and fill volumes from 12d
Road Pavement	2.1	Primary Arterial Pavement	0	m2	186.26	1.32	$ -	
	2.2	Collector Arterial Pavement	6354	m2	112.44	1.32	$ 943,087.75	
	2.3	Subgrade Preparation	1271	m2	16.16	1.32	$ 27,108.32	20% of pavement area
	2.4	Raised Priority Crossing - asphalt	120	m2	78	1.06	$ 9,915.02	Hot bituminous concrete including tack coat: 50mm thick multiplied by 3 (Rawlinsons 2023)
	2.5	Raised Priority Crossing - surface treatment	120	m2	21.5	1.06	$ 2,732.99	Thermoplastic marking of bitumen paving (Rawlinsons 2023)
Concrete Works	3.1	Kerb and Channel	3620	m	174	1.00	$ 629,880.00	
	3.2	Traffic Island	0	m2	84.07	1.32	$ -	
	3.3	SUP/footpath	2676	m2	73.63	1.32	$ 260,055.17	
	3.4	Cycle Path	2841	m2	91.94	1.32	$ 344,782.92	
Drainage	4.1	Drainage Pipe 300mm CR Bfilled	226	m	197.96	1.32	$ 59,120.75	Scaled up from benchmark item 3
	4.2	Drainage Pipe 375mm CR Bfilled	1027	m	282.96	1.32	$ 383,657.26	Scaled up from benchmark item 3
	4.3	Drainage Pipe 450mm CR Bfilled	792	m	334.33	1.32	$ 349,466.79	Scaled up from benchmark item 3
	4.4	Drainage Pipe 525mm CR Bfilled	0	m	448.03	1.32	$ -	Scaled up from benchmark item 3
	4.5	Drainage - Pits	36	No.	2806.1	1.32	$ 134,086.68	Scaled up from benchmark item 3
	4.6	Drainage - Subsoil Drainage	3620	m	43.4	1.32	$ 207,382.56	Based on total kerb length
Traffic	5.1	Traffic Signals	0	Item/ per leg	128786.34	1.32	$ -	
Landscape	6.1	Trees	217	No.	363.01	1.32	$ 104,076.42	Scaled up from benchmark item 3
	6.2	Landscaping	25327	m2	25.16	1.32	$ 841,136.70	Area of fill batters and verges
	6.3	Topsoil Seeding	25327	m2	8.44	1.32	$ 282,161.91	Area of fill batters and verges
Street Lighting	7.1	Street Lighting	905	m	225.67	1.32	$ 269,585.38	Based on length of road
Miscellaneous	8.1	Linemarking	6354	m2 of pavement	4.09	1.32	$ 34,304.77	
	8.2	Regulatory Signage	12	Item	380.39	1.32	$ 6,025.38	Scaled up from benchmark item 3
	8.3	Landscape Maintenance (road)	25327	m2	2.96	1.32	$ 98,957.26	
	8.4	Tactile Pavers (Hazard only)	8	Item	319.78	1.32	$ 3,376.88	
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	0	m3	230	1.06	$ -	Break up and remove reinforced concrete in open excavations (Rawlinsons 2023)
Delivery	10.1	Council Fees	1	%	3.25	-	$ 224,871.94	
	10.2	VicRoads Fees	1	%	1	-	$ 69,191.37	
	10.3	Traffic Management	1	%	5	-	$ 345,956.83	
	10.4	Environmental Management	1	%	0.5	-	$ 34,595.68	
	10.5	Survey/Design	1	%	5	-	$ 345,956.83	
	10.6	Supervision and Project Management	1	%	9	-	$ 622,722.29	
	10.7	Site Establishment	1	%	2.5	-	$ 172,978.41	
	10.8	Contingency	1	%	15	-	$ 1,037,870.48	
		Excluding Delivery					$ 6,919,136.54	
		Including Delivery					$ 9,773,280.37	

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RD-01 VDP CROSSING

Road VDP cable/conduit crossing

Indexation factor for cost items provided by Spiire: 1.00

Group	Item	Description	Quantity	Unit	Rate ($)	Cost ($)	Comments
Preliminary Site & Earthworks	1.1	Service Proving	1	Item	25000	$ 25,000.00	
	1.2	Site Preparation	185	m2	5	$ 925.00	
	1.3	Earthworks	160	m3	50	$ 8,000.00	
	1.4	Crushed Rock Backfill	90	m3	100	$ 9,000.00	
Road Pavement	2.1	Subgrade preparation	120	m2	10	$ 1,200.00	
	2.2	Thermal backfill	80	m3	175	$ 14,000.00	
Ancillaries	3.1	Structural Design HV Crossing	1	Item	10000	$ 10,000.00	
	3.2	Proof Engineering (Nexans Olex)	1	Item	15000	$ 15,000.00	
	3.3	Permits/Insurance	1	Item	250000	$ 250,000.00	
	3.4	Construction certification of independent reviewer	1	Item	20000	$ 20,000.00	
Delivery	8.1	Council Fees	1	%	3.25	$ 1,889.06	
	8.2	Environmental Management	1	%	0.5	$ 290.63	
	8.3	Survey/Design	1	%	10	$ 5,812.50	
	8.4	Supervision and Project Management	1	%	18	$ 10,462.50	
	8.5	Site Establishment	1	%	2.5	$ 1,453.13	
	8.6	Contingency	1	%	15	$ 8,718.75	
Total		Excluding Delivery and Ancillaries				$ 58,125.00	
		Including Delivery and Ancillaries				$ 381,751.56	

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CU-01 - Culvert - (RD-01) over constructed waterway

Culvert Option 4 - Item 28

VPA benchmark indexation factor (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	1120.5	m2	4.23	1.32	$ 6,256.42	Scaled up from benchmark item 28
	1.2	Diversion works	1	Item	20125	1.32	$ 26,565.00	As per benchmark item 28
	1.3	Waterway re-shaping	1	Item	4600	1.32	$ 6,072.00	As per benchmark item 28
	1.4	Stripping of topsoil	1620	m2	4.49	1.32	$ 9,601.42	Scaled up from benchmark item 28
	1.5	Excavation	5647.5	m3	42.55	1.32	$ 317,197.49	Scaled up from benchmark item 28
	1.6	Formation of batters	292	m3	17.25	1.32	$ 6,648.84	As per benchmark item 28
Drainage Structure	2.1	Box culvert units 1200 x 2100 (No.)	68	No.	4830	1.32	$ 433,540.80	Scaled up from benchmark item 28
	2.2	Link slab 1200 x 2100 (No.)	55	No.	2839.35	1.32	$ 206,136.81	Scaled up from benchmark item 28
	2.3	Foundation slab 1200 x 2100 (200mm)	1410	m2	243.8	1.32	$ 453,760.56	Scaled up from benchmark item 28
	2.4	Granular Bedding 150 mm thick crushed	1410	m2	19.84	1.32	$ 36,926.21	Scaled up from benchmark item 28
	2.5	Apron slab (m2)	229.5	m2	253.29	1.32	$ 76,731.67	Scaled up from benchmark item 28
	2.6	Wing wall (m2)	33	m2	805	1.32	$ 35,065.80	As per benchmark item 28
	2.7	End wall (m2)	60	m2	805	1.32	$ 63,756.00	Scaled up from benchmark item 28
On Structure	3.1	Structural Fill (m3)	1545	m3	86.25	1.32	$ 175,898.25	Scaled up from benchmark item 28
	3.2	Vehicle Barrier	96	lm	284.63	1.32	$ 36,068.31	Scaled up from benchmark item 28
	3.3	Signs (Item)	1	Item	2645	1.32	$ 3,491.40	As per benchmark item 28
Delivery	4.1	Council Fees	1	%	3.25	-	$ 61,545.80	
	4.2	VicRoads Fees	1	%	1	-	$ 18,937.17	
	4.3	Traffic Management	1	%	5	-	$ 94,685.85	
	4.4	Environmental Management	1	%	0.5	-	$ 9,468.58	
	4.5	Survey/Design	1	%	5	-	$ 94,685.85	
	4.6	Supervision and Project Management	1	%	9	-	$ 170,434.53	
	4.7	Site Establishment	1	%	2.5	-	$ 47,342.92	
	4.8	Contingency	1	%	15	-	$ 284,057.55	
		Excluding Delivery					$ 1,893,716.98	
		Including Delivery					$ 2,674,875.23	

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CU-02 - Culvert - (SUP-01) over constructed waterway

Culvert Option 4 - Item 28

VPA benchmark indexation factor (July 2024): 1.29
Indexation factor for Rawlinsons items (March 2025): 1.06
Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation	112.05	m2	4.23	1.32	$ 625.64	Scaled down from benchmark item 28
	1.2	Diversion works	1	Item	20125	1.32	$ 26,565.00	As per benchmark item 28
	1.3	Waterway re-shaping	1	Item	4600	1.32	$ 6,072.00	As per benchmark item 28
	1.4	Stripping of topsoil	162	m2	4.49	1.32	$ 960.14	Scaled down from benchmark item 28
	1.5	Excavation	564.75	m3	42.55	1.32	$ 31,719.75	Scaled down from benchmark item 28
	1.6	Formation of batters	292	m3	17.25	1.32	$ 6,648.84	As per benchmark item 28
Drainage Structure	2.1	Box culvert units 1200 x 2100 (No.)	6	No.	4830	1.32	$ 38,253.60	Scaled down from benchmark item 28
	2.2	Link slab 1200 x 2100 (No.)	3	No.	2839.35	1.32	$ 11,243.83	Scaled down from benchmark item 28
	2.3	Foundation slab 1200 x 2100 (200mm)	141	m2	243.8	1.32	$ 45,376.06	Scaled down from benchmark item 28
	2.4	Granular Bedding 150 mm thick crushed	141	m2	19.84	1.32	$ 3,692.62	Scaled down from benchmark item 28
	2.5	Apron slab (m2)	76.5	m2	253.29	1.32	$ 25,577.22	Scaled up from benchmark item 28
	2.6	Wing wall (m2)	33	m2	805	1.32	$ 35,065.80	As per benchmark item 28
	2.7	End wall (m2)	20	m2	805	1.32	$ 21,252.00	Scaled up from benchmark item 28
On Structure	3.1	Structural Fill (m3)	154.5	m3	86.25	1.32	$ 17,589.83	Scaled down from benchmark item 28
	3.2	Safety barrier	70	lm	350	1.06	$ 25,952.78	Bridge balustrade (Rawlinsons 2023)
	3.3	Signs (Item)	0	Item	2645	1.32	$ -	No allowance for signage
Delivery	4.1	Council Fees	1	%	3.25	-	$ 9,639.34	
	4.2	VicRoads Fees	1	%	1	-	$ 2,965.95	
	4.3	Traffic Management	1	%	5	-	$ 14,829.76	
	4.4	Environmental Management	1	%	0.5	-	$ 1,482.98	
	4.5	Survey/Design	1	%	5	-	$ 14,829.76	
	4.6	Supervision and Project Management	1	%	9	-	$ 26,693.56	
	4.7	Site Establishment	1	%	2.5	-	$ 7,414.88	
	4.8	Contingency	1	%	15	-	$ 44,489.27	
		Excluding Delivery					$ 296,595.11	
		Including Delivery					$ 418,940.59	

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CU-03 (N/A) - Culvert - (SUP-02) over constructed waterway

Culvert Option 4 - Item 28

VPA benchmark indexation factor (July 2024): 1.29

Indexation factor for Rawlinsons items (March 2025): 1.06

Item was removed from the ICP on recommendation from the Draft Casey Amendment C296case Referral 11 – Croskell (Employment) Precinct Structure Plan and Infrastructure Contributions Plan VPA Projects Standing Advisory Committee Report May 2025

Indexation factor for VPA benchmark items (July 2025): 1.32

Group	Item	Description	Quantity	Unit	Rate ($)	Indexation factor	Cost ($)	Comments
Siteworks and Earthworks	1.1	Site Preparation		m2	4.23	1.32	$ -	Scaled down from benchmark item 28
	1.2	Diversion works		Item	20125	1.32	$ -	As per benchmark item 28
	1.3	Waterway re-shaping		Item	4600	1.32	$ -	As per benchmark item 28
	1.4	Stripping of topsoil		m2	4.49	1.32	$ -	Scaled down from benchmark item 28
	1.5	Excavation		m3	42.55	1.32	$ -	Scaled down from benchmark item 28
	1.6	Formation of batters		m3	17.25	1.32	$ -	As per benchmark item 28
Drainage Structure	2.1	Box culvert units 1200 x 2100 (No.)		No.	4830	1.32	$ -	Scaled down from benchmark item 28
	2.2	Link slab 1200 x 2100 (No.)		No.	2839.35	1.32	$ -	Scaled down from benchmark item 28
	2.3	Foundation slab 1200 x 2100 (200mm)		m2	243.8	1.32	$ -	Scaled down from benchmark item 28
	2.4	Granular Bedding 150 mm thick crushed		m2	19.84	1.32	$ -	Scaled down from benchmark item 28
	2.5	Apron slab (m2)		m2	253.29	1.32	$ -	Scaled up from benchmark item 28
	2.6	Wing wall (m2)		m2	805	1.32	$ -	As per benchmark item 28
	2.7	End wall (m2)		m2	805	1.32	$ -	Scaled up from benchmark item 28
On Structure	3.1	Structural Fill (m3)		m3	86.25	1.32	$ -	Scaled down from benchmark item 28
	3.2	Safety barrier		lm	350	1.06	$ -	Bridge balustrade (Rawlinsons 2023)
	3.3	Signs (Item)		Item	2645	1.32	$ -	No allowance for signage
Delivery	4.1	Council Fees	1	%	3.25	-	$ -	
	4.2	VicRoads Fees	1	%	1	-	$ -	
	4.3	Traffic Management	1	%	5	-	$ -	
	4.4	Environmental Management	1	%	0.5	-	$ -	
	4.5	Survey/Design	1	%	5	-	$ -	
	4.6	Supervision and Project Management	1	%	9	-	$ -	
	4.7	Site Establishment	1	%	2.5	-	$ -	
	4.8	Contingency	1	%	15	-	$ -	
		Excluding Delivery					$ -	
		Including Delivery					$ -	

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