smec
an SJ company

IMAGE SOURCE: VICTORIAN PLANNING AUTHORITY

Final Concept Design and Report

Bannockburn South-East PSP- Transport Concept Design and Costs

Prepared for: Victorian Planning Authority (VPA)
4 July 2025
Client Reference No. PSP 1364

SMEC INTERNAL REF. 30043502T

SMEC simplifies the complex. We unlock the potential of our people to look at infrastructure differently, creating better outcomes for the future.

engineering positive change

Document Control

Document Type	Final Concept Design and Report
Project Title	Bannockburn South-East PSP- Transport Concept Design and Costs
Project Number	30043502T
File Location	X:\Projects\300435\30043502T\200 Detailed Design\215 Deliverables\215-3 Design Reports
Revision Number	D

Revision History

Revision No.	Date	Prepared By	Reviewed By	Approved for Issue By
A	11/03/2025	Hitesh Dadwal	Glen Chrzanowski	Adriano Donato
B	30/04/2025	Matt Christie	Glen Chrzanowski	Adriano Donato
C	26/05/2025	Adriano Donato	Glen Chrzanowski	Adriano Donato
D	04/07/2025	Adriano Donato	Glen Chrzanowski	Adriano Donato

Issue Register

Distribution List	Date Issued	Number of Copies
Victorian Planning Authority (VPA)	4/07/2025	1

SMEC Company Details

Approved by	Adriano Donato
Address	Wurundjeri Country, Collins Square, Tower 4, Level 20, 727 Collins St, Docklands, VIC, 3008, Australia
Phone	+61 3 9514 1500
Website	www.smec.com
Signature	

Important Notice

This report is confidential and is provided solely for the purposes of that stated within the body this document. This report is provided pursuant to a Consultancy Agreement between SMEC Australia Pty Limited ("SMEC") and VPA, under which SMEC undertook to perform a specific and limited task for VPA. This report is strictly limited to the matters stated in it and subject to the various assumptions, qualifications and limitations in it and does not apply by implication to other matters. SMEC makes no representation that the scope, assumptions, qualifications and exclusions set out in this report will be suitable or sufficient for other purposes nor that the content of the report covers all matters which you may regard as material for your purposes.

This report must be read as a whole. The executive summary is not a substitute for this. Any subsequent report must be read in conjunction with this report.

The report supersedes all previous draft or interim reports, whether written or presented orally, before the date of this report. This report has not and will not be updated for events or transactions occurring after the date of the report or any other matters which might have a material effect on its contents, or which come to light after the date of the report. SMEC is not obliged to inform you of any such event, transaction or matter nor to update the report for anything that occurs, or of which SMEC becomes aware, after the date of this report.

Unless expressly agreed otherwise in writing, SMEC does not accept a duty of care or any other legal responsibility whatsoever in relation to this report, or any related enquiries, advice or other work, nor does SMEC make any representation in connection with this report, to any person other than VPA. Any other person who receives a draft or a copy of this report (or any part of it) or discusses it (or any part of it) or any related matter with SMEC, does so on the basis that he or she acknowledges and accepts that he or she may not rely on this report nor on any related information or advice given by SMEC for any purpose whatsoever.

Contents

Appendices

Figures

Tables

Introduction

The Victorian Planning Authority (VPA) is preparing the Bannockburn South-East Precinct Structure Plan (PSP) and Development Contributions Plan (DCP) in collaboration with Golden Plains Shire Council. The precinct was identified as a priority growth area in the Bannockburn Growth Plan to deliver residential development in the short term. The precinct is located to the southeast of the existing Bannockburn township, approximately 16km north-west of Geelong. The precinct is bound by the existing urban area to the north, the Future Growth Option to the east, a railway line to the south and Bruce's Creek to the west.

The precinct encompasses an area of 523ha. The vision for Bannockburn is to accommodate approximately 4,600-5,200 dwellings and 13,800-16,000 residents.

Project Scope

SMEC was commissioned by the VPA to develop concept level designs for transport projects to be funded under a Development Contributions Plan (DCP). 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:

- 4 x Road Project
- 3 x Intersections
- 1 x Bridge

See below figure for an overall layout of the PSP designed as part of these scope of works.

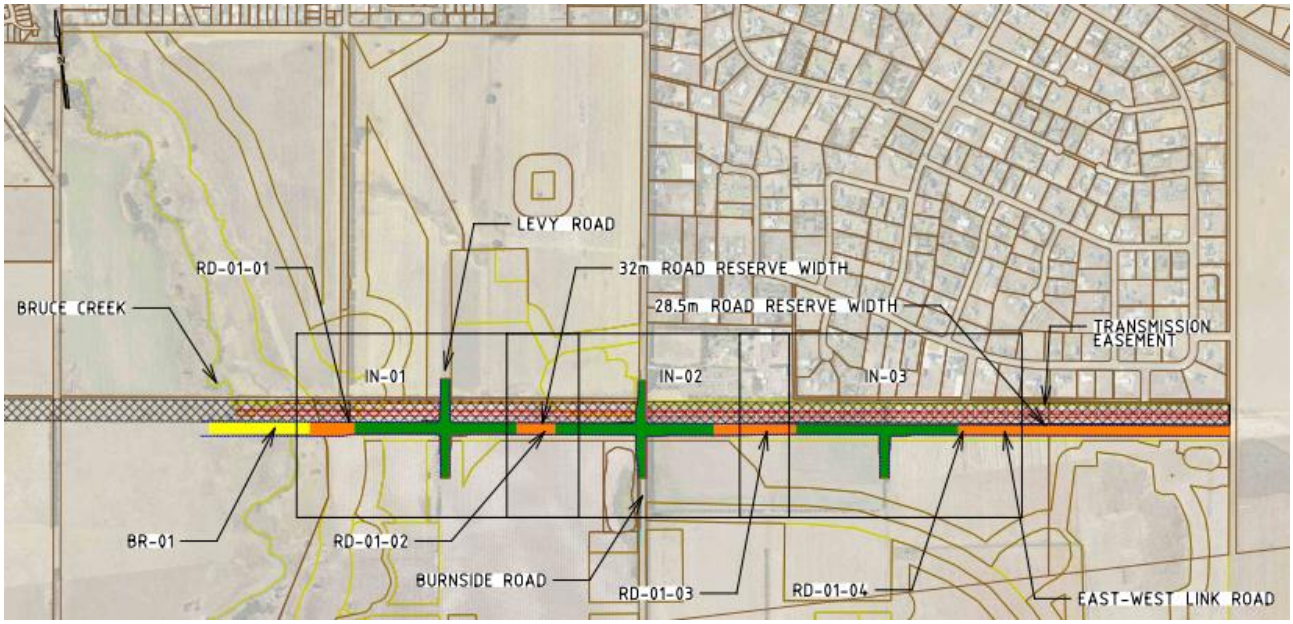


Figure 1: Overall layout Plan

1.1 Road Projects

There are 4 proposed road project included within the PSP scope of works. Both interim and ultimate designs are provided for each road project. The designs are developed using the cross-sections provided by the VPA.

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

- Existing non-PSP property boundaries

- Land geometry
- Proposed adjacent land use.
- High voltage easement

1.2 Intersection Projects

There are 3 proposed intersection projects included within the scope of works. All intersections adopt the ultimate layout with respect to lanes adopted. However, the right turn lane lengths adopted vary between the interim and the ultimate layout. The intersection layout will facilitate the location of the proposed right of way boundaries to ensure that enough land is reserved. The interim design is used as the basis for the DCP costing exercise. SMEC did not undertake any traffic analysis for this commission, the designed form of the intersection layouts is adopted from the template 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
- Proposed adjacent land use
- High voltage easement
- Minimise the redundant construction between interim and ultimate designs

1.3 Bridge

There is 1 proposed bridge project included within the PSP scope of works. An interim and ultimate design layout and typical cross-section is provided in the design drawings. The designed form of the road layout is adopted from the template cross section layouts provided by the VPA within the Bannockburn South East Precinct Bridges Feasibility Assessment by Jacobs (March 2025).

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
- Bruce Creek Waterway
- Proposed adjacent land use
- High voltage easement

Design Criteria and Methodology

2.1 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 Shared 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

2.2 Typical Cross Sections

Typical cross sections used in the road and intersection projects are shown in the below figures.

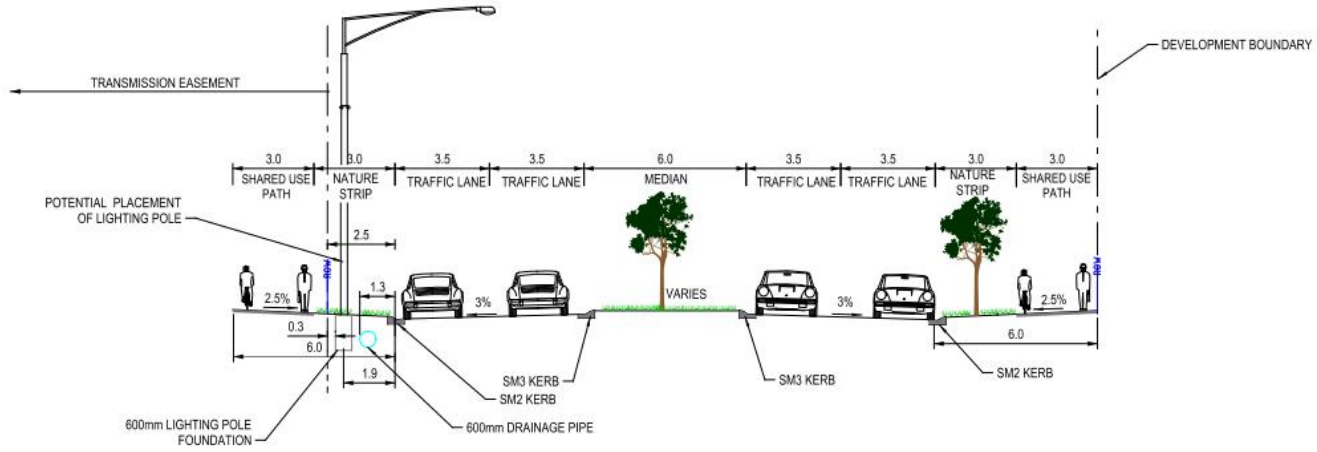


Figure 2: Cross-section Adapted From VPA Standard Arterial

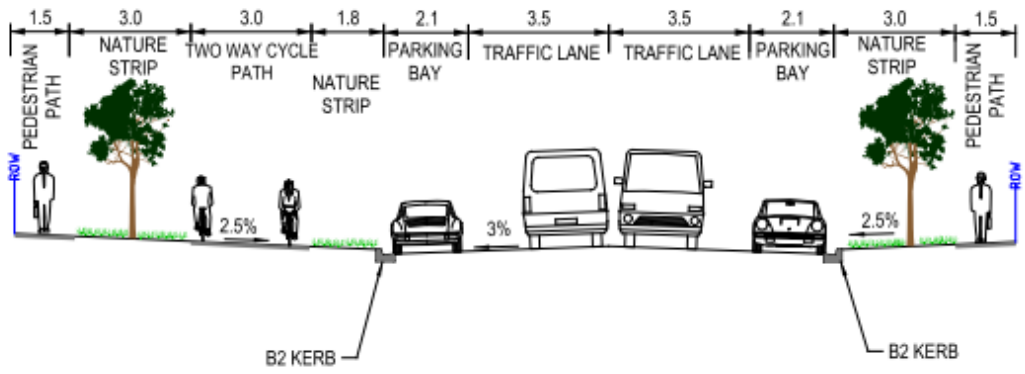


Figure 3: Cross-section Connector Street

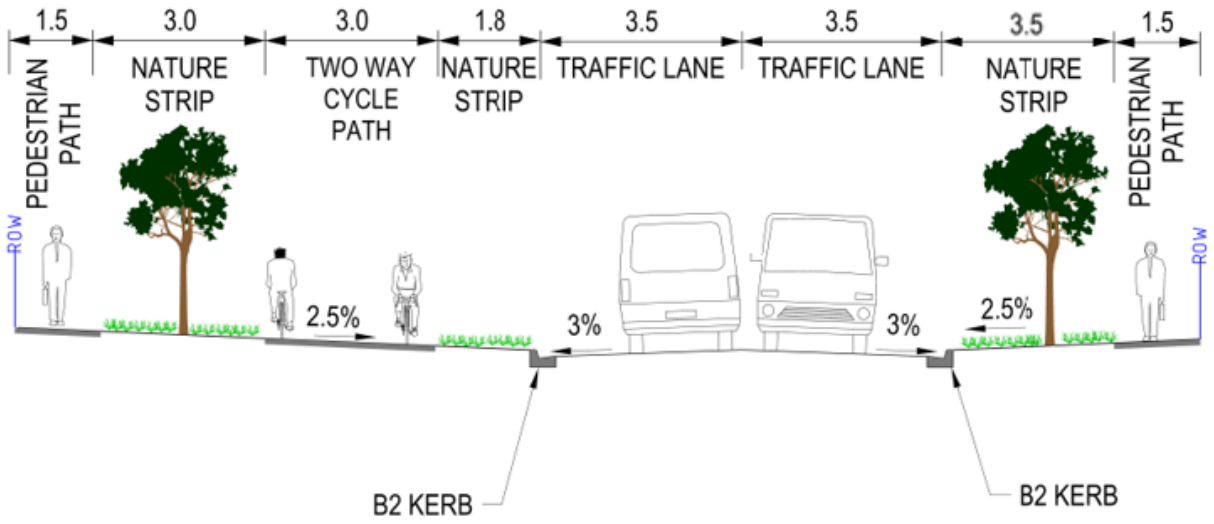


Figure 4: Burnside Road South of East-West Link Road

2.3 Road Projects

Details of the East-West Link Road (RD-01) road project are shown in Table 1.

Table 1: Road Projects

Project No.	Road Name	Project Description	Road reserve width	Design speed	Road Length (PSP section)	Benchmark Infrastructure Report Item No.
RD-01-01	East- West Link Road (BR-01 to IN-01)	Secondary Arterial Ultimate – 4 lanes Interim – single carriageway	Typically 32 m (Varies due to easement)	60 km/h	~116m	Modified Item 2
RD-01-02	East- West Link Road (IN-01 to IN-02)	Secondary Arterial Ultimate – 4 lanes Interim – single carriageway	Typically 32 m (Varies due to easement)	60 km/h	~104m	Modified Item 2
RD-01-03	East- West Link Road (IN-02 to IN-03)	Secondary Arterial Ultimate – 4 lanes Interim – single carriageway	Typically 28.5 m (Varies due to easement)	60 km/h	~227m	Modified Item 2
RD-01-04	East- West Link Road (IN-03 to eastern extent)	Secondary Arterial Ultimate – 4 lanes Interim – single carriageway	Typically 28.5 m (Varies due to easement)	60 km/h	~752m	Modified Item 2

2.4 Intersection Projects

Table 2: Intersection Projects

Project No.	Road Intersection	Project Description	Design Requirements	Benchmark Infrastructure Report Item No.	Design Vehicle	Check Vehicle

IN-01	East-West Link Road and Levy Road	Secondary Arterial / Connector Road	East-West Link Road 4 lanes and Connector Road. Interim and Ultimate same lane configuration	Item 9	12.5m single unit truck/bus	19m prime mover and semi-trailer
IN-02	East-West Link Road and Burnside Road	Secondary Arterial / Connector Road	East-West Link Road 4 lanes and Connector Road. Interim and Ultimate same lane configuration	Item 9	12.5m single unit truck/bus	19m prime mover and semi-trailer
IN-03	East-West Link Road and South Connector	Secondary Arterial / Connector Road	East-West Link Road 4 lanes and Connector Road. Interim and Ultimate same lane configuration	Item 9	12.5m single unit truck/bus	19m prime mover and semi-trailer

The design vehicles for the intersections are listed in Table 2 for each intersection, based on the classification of the roads intersecting. Design vehicle swept paths shall 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. It is expected that swept paths will be verified at the detailed design stage.

Turn lane lengths provided in the design drawings are as per the VPA intersection benchmark drawings. The turn lane lengths in the VPA benchmarks typically allow for deceleration to the stop line as a minimum. Based on design guidelines and project experience, as a minimum DTP would typically adopt a design vehicle plus deceleration as the turn lane length. Therefore, there is a risk that cost estimates (pavement allowance mostly) for the projects are less than the ultimate cost. Turn lane lengths at detailed design will need to be reconfirmed based on traffic modelling undertaken at such time in the future. Longer turn lane lengths should not affect the estimated land take boundaries.

2.5 Bridge

Details for the single bridge project is listed in Table 3.

Table 3: Bridge Projects

Project No.	Location	Project Description	Design requirement	Benchmark Infrastructure Report Item No.
BR-01	East-West Link Road	Secondary Arterial: Concept design prepared by others	60 Km/h Ultimate – 4 lanes Interim – 2 lanes single carriageway	N/A - Bridge design is based off Jacobs Bridge Feasibility Assessment

The bridge has adopted a “clear width” on the shared path of 3.1 m instead of the 3.0 m as proposed by Jacobs. The 3.1m width allows for a 2.5m path with a 0.3m clearance on either side. The 2.5 m width is in accordance with the minimum width for a regional shared path in AGRD Part 6A Table 5.3. Cyclist railing is proposed on both sides of the shared path at a 0.3m offset to provide a smooth feature to meet the minimum offset requirements from AGRD Part 6A Section 5.5. The bridge is proposed to be 280m long between chainages 265-545 with 8 spans of 35m.

2.5.1 Bridge Feasibility Peer Review

Peer review of “Bannockburn South East Precinct Bridges Feasibility Assessment by Jacobs (March 2025)” and necessary application to costing has been undertaken. The proposed BR-01 bridge concept design and associated costing is considered appropriate for the bridge’s purpose.

2.5.1.1 Bridge Form

It is noted that the feasibility report design consists of 10 spans, each 32.3m in length, with 1800mm deep, 2000mm wide Super-T beams. This is considered a conservative design and some potential improvements to be considered in detailed design may include:

- Use of 1500mm deep Super-T beams (keeping 32.3m spans)
- Increase span length up to 40m, reducing number of spans (keeping 1800 deep Super-T beams)
- Increase width of beams (up to 3000mm), reducing number of beams required
- Shift abutments, increasing the abutment height but reducing the total bridge length to 280m

Based on the above assessment, the following bridge concept design for the purpose of costing has been adopted:

- Adopt 1800mm deep Super-T beams (same as feasibility report)
- Slightly lengthen the spans from 32.3m to 35m
- Abutments at locations where the design surface is approximately 4.0m above the existing surface so there is sufficient headroom to undertake future bridge inspections
- This has resulted in a 280m long bridge, with 8 spans of 35m
  - At detailed design there is a further opportunity to adopt 7 spans with 40m pier spacing subject to a more detailed assessment

2.5.1.2 Additional considerations

Through the peer review of the bridge design and cost estimate, the following has been noted:

- It is noted that the report specifies a 200mm thick deck slab, while costing is based on a 250mm thickness. Given the proposed medium performance barriers, a 250mm thick deck is considered more realistic.
- The report also notes that the SUP design is not DDA compliant. Given the relative flat road grades of the proposed option (approx. 1%), DDA compliance should be achievable without major change to proposed cross-section or long-section.
- The report does not provide a 1 in 100 Year Flood level therefore it has not been shown on the bridge elevation drawing. Given the significant height and cross-sectional area under the bridge there are not expected to be any impacts to the design, however future flood modelling is recommended to confirm the impacts (if any).
- The overall design costs for both the contractor and the consultant are likely higher than predicted and in detailed design there may be an opportunity for the costs to be reduced, however, to be confirmed by the contractors.
- The following items on the provided cost estimates have been noted and updated accordingly:
  - Off-structure barriers extend 6m. It is expected that at least 36m of barriers would be required (in accordance with DTP BTN-001).

Refer to appendix C for the complete set of Draft Cost Estimates.

2.6 Design Considerations

The development of each road, intersection and bridge project has considered the adjacent constraints to best minimise impact to existing infrastructure or existing boundaries. The interim designs have generally been developed to minimise the amount of redundant works when the road layout is upgraded to its ultimate configuration. The key design considerations are listed below:

- The ultimate eastbound carriageway of the east-west link road has been determined by providing a minimum offset of 2.5m from the kerb line to the existing transmission easement. This offset allows for potential infrastructure (drainage, traffic pedestals, lighting) to be placed within the road reserve and not

within the transmission easement. This offset increase to 6.0m immediately east of Burnside Road to allow for the development of the 3.5m wide left turn lanes at IN-01 and IN-02.

- The interim carriageway of the east-west link road adopts the ultimate southern carriageway. The southern carriageway was adopted so the service road can be connected to the interim design and the future works can be constructed with minimal impact to the existing service road connections. It also means the future construction works are further away from property frontage, minimising the impact to the community.
- Levy Road alignment (IN-01) has been selected so that if the southern leg continues straight, it will not impact the future parcels proposed. Refer to gold linework on the PSP key plan for precinct plan layout (DRG 30043502T-2200).
- Burnside Road alignment (IN-02) has been developed in a way that will not impact the existing right of way boundary on the northeast corner of the intersection as this land is not part of the PSP. The existing carriageway is proposed to be retained as the ultimate alignment, with works contained within the existing road reserve wherever practical. This alignment impacts existing overhead power, telecoms and water services (DRG 30043502T-3002).

2.7 Pavement

Noting that project specific traffic data or subgrade assessment is not available, indicative pavement profiles have been provided for information only. Typical pavement composition provided for each road category based on common practice and past project experience specific to the geographical area. The pavement design shall be reviewed and updated upon confirmation of project specific design criteria.

Figure 5: shows an extract from the Victoria Geological Map 1:63,000 Series Geelong Mapsheet. Below geological unit is expected at subgrade level:

- Nv1: Newer volcanic. Iddingsite labradorite basalt. Olivine labradorite basalt.

Extremely weathered basalt and basaltic clay present in west regions of Melbourne are generally highly expansive and highly plastic. Allowance for potential subgrade treatment shall be made. A nominal capping layer has been included in the indicative profiles to prevent moisture infiltration in expansive subgrade.

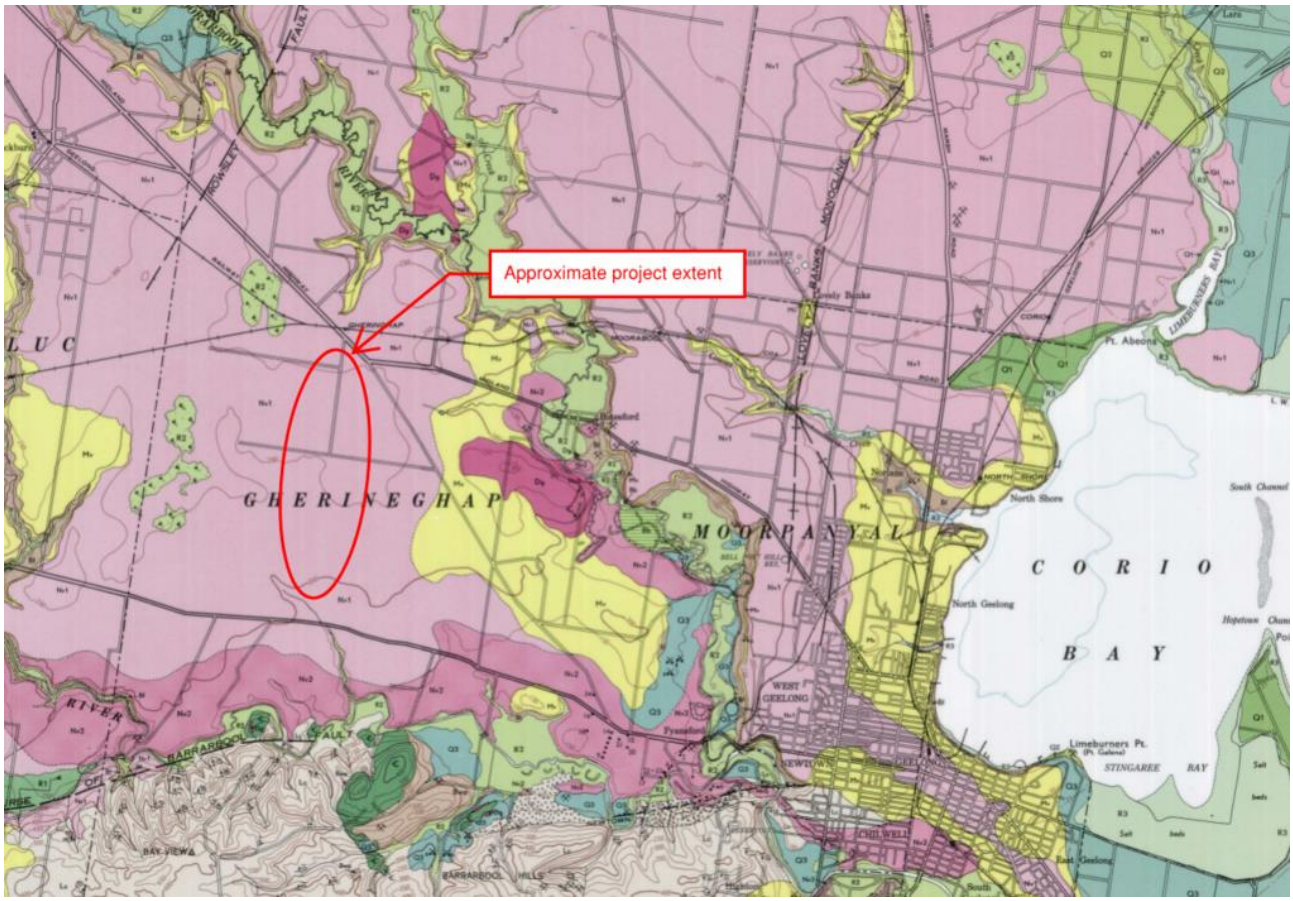


Figure 5: Victoria Geological Map 1:63,000 Series, Geelong Mapsheet

Arterial Roads:

FDA Option:

Pavement Type 1 – Arterial Road (Indicative)			
Layers		Thickness (mm)	Material
A	Wearing Course	40	Size 14mm Type V Asphalt (Intersection) Size 14mm Type H Asphalt (Midblock)
B	Intermediate Course	100	Size 20mm Type SI Asphalt
C	Base Course	100	Size 20mm Type SI Asphalt
D	Subbase	150	Class 4 Crushed Rock / Concrete
E	Capping Layer (if required)	300	Type A Capping Material (Min. CBR 6%, k ≤ 5E-09 m/s)
Total (including capping layer)		690	Subgrade DCBR to be confirmed

DSA Option:

Pavement Type 1 – Arterial Road (Indicative)			
Layers		Thickness (mm)	Material
A	Wearing Course	40	Size 14mm Type V Asphalt (Intersection) Size 14mm Type H Asphalt (Midblock)
B	Intermediate Course	75	Size 20mm Type SI Asphalt
C	Base Course	75	Size 20mm Type SI Asphalt
D	Upper Subbase	180	Cement Treated Crushed Rock; or (E = 500MPa)

			Cement Treated Crushed Concrete (E = 500MPa)
E	Lower Subbase	150	Class 4 Crushed Rock / Concrete
F	Capping Layer (if required)	150	Type A Capping Material (Min. CBR 6%, k ≤ 5E-09 m/s)
Total (including capping layer)		670	Subgrade DCBR to be confirmed

Local Connector:

Pavement Type 2 – Local Connector (Indicative)			
Layers		Thickness (mm)	Material
A	Wearing Course	40	Size 14mm Type V Asphalt (Intersection) Size 14mm Type H Asphalt (Midblock)
B	Intermediate Course	60	Size 20mm Type SI Asphalt
C	Base Course	60	Size 20mm Type SI Asphalt
D	Subbase	150	Class 4 Crushed Rock / Concrete
E	Capping Layer (if required)	150	Type A Capping Material (Min. CBR 6%, k ≤ 5E-09 m/s)
Total (including capping layer)		590	Subgrade DCBR to be confirmed

2.8 Sodic and Dispersive Soil Methodology

According to WSP Sodic/Dispersive Soils Testing and Assessment Report (14 January 2025), it is understood that a field inspection was completed on 25 March 2024, followed by an intrusive ground investigation (GI) conducted between 22 and 23 May 2024. During the site walkover, evidence of erosion along parts of the steep escarpment was observed along Bruce Creek, which forms the western boundary of the precinct.

The GI comprised of twenty (20) boreholes drilled to maximum depth of 3.45 m below ground level (m bgl). Thirty-one (31) samples were collected between 0.1 m and 2.25 m bgl from 13 locations across the precinct to assess soil erosion risk considering the potential presence of sodic and dispersive soils. The GI was also limited by presence of mapped aboriginal heritage artefacts close to Bruce Creek where some features of interest could not be physically sampled by WSP. The soil profile across the site predominantly consists of a sandy layer overlying basaltic clay, with generally high plasticity which is known to be susceptible to shrink-swell effect.

Figure 6: shows the GI location plan, with sampling locations for Emerson Classification testing noted in circles. Red circles highlight the locations with samples classified as Emerson Class 1 or 2, whereas test samples from locations marked in black have Emerson Class 3 (slaking/dispersion only when remoulded) or 7 (no slaking with swelling). The Emerson Class 1 or 2 results indicate materials are likely to be dispersive under influence of water and these are noted predominantly in the flatter parts of the precinct, away from the river escarpment. These samples were also tested with exchangeable sodium percentage (ESP) mostly above 6%, and up to 34.2%, indicating presence of sodic to very sodic soils.

Referring to the laboratory results detailed in WSP report, the upper 0.4 m surface soil is also noted to be less dispersive than the subsurface soils below. This suggests minimal ground disturbance to limit the exposure of subsurface soils could reduce risk of soil erosion to the site. This finding has therefore led to WSP to present a heat map outlining erosion risk for the precinct along with the site inspection observations.

Figure 7 presents the Erosion Risk Map prepared by WSP based on slope gradient where the highest risk being identified on slope greater than 15% as the landscape and exposure of subsurface soils largely dictates the erosion vulnerability at the precinct. Low to medium risk is rated for flatter areas of the precinct.

Based on the review of the sodic/dispersive soil assessment and the proposed concept design, bridge BR-01 and its connecting road section RD-01-01 are identified to be within the highest risk zone, while the rest of the

site is located within low to medium risk zone. Soil stabilisation measures and engineering controls summarised in Table should be considered for the design and construction of the proposed development of this project.

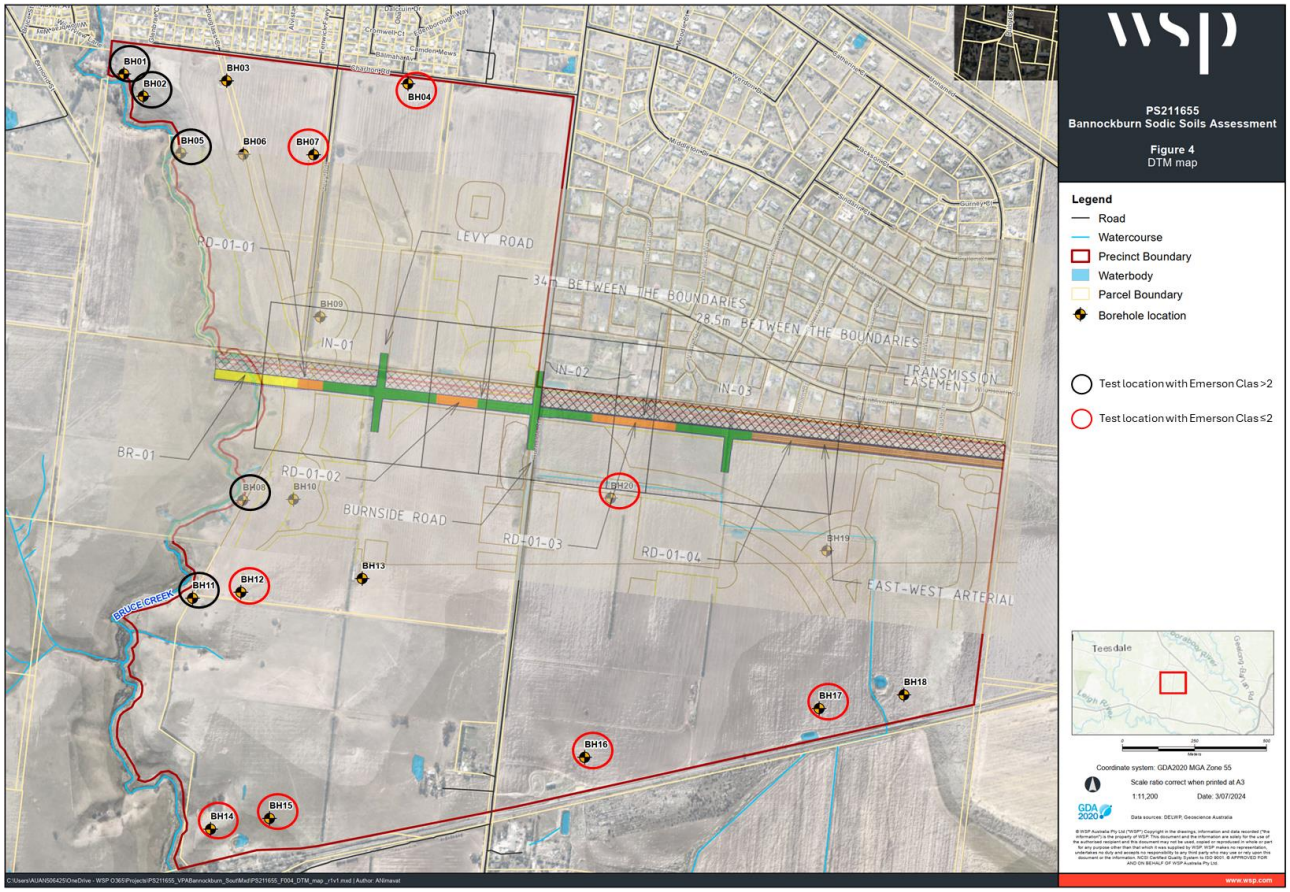


Figure 6: Test locations and Emerson Classification Results

Figure 7: WSP Erosion Risk Map with Bannockburn South East proposed road overlay

Table 4: High level recommendation on control measures for managing dispersive soils

Purposed Development	Relevant Geotechnical Work	Identified Geotechnical Risks	Comments and Discussions	Recommended Control Measures
Site formation/ earthworks	Temporary excavation and fill placement	Proposed road alignment close to the existing waterbodies (northern side of alignment) as shown in Figure 6:	• Construction and earthwork are likely to cause disturbance to the ground where topsoil will likely be ineffective to protect the underlying subsoil and limit surface runoff or overland flow to the direction or around the waterbodies which will trigger surface erosion and may affect the slope of waterbodies if not managed properly. • Earthwork for cutting of subgrade level in the vicinity of waterbodies may induce ground instability to the waterbodies.	• Undertake detailed site investigation to assess the stability of the subsurface conditions around waterbodies to ensure no embankment instability occurs during road excavation and to manage water flow and mitigate the effects of flooding on road base and waterbodies embankment slope. • Minimise disturbance to the existing waterbodies during earthworks by mean of barricade of site and no-go-zone boundary. • If disturbance occurs, restoration should be carried out through revegetation or use of appropriate geosynthetic materials to temporary protect the exposed surface from further deterioration and erosion. • Design and adopt high level compaction to the subgrade and road base layers in combination with appropriate drainage system to minimise subsurface drainage flow that could trigger tunnel erosion.
	Subgrade preparation and foundation	Soil erosion due to the dispersive nature of the subsurface soil	• Dispersive soils are highly prone to erosion when exposed to water, causing instability of road base and foundation of the bridge crossing.	• Undertake detailed site investigation to assess the subsurface conditions and stability of the road subgrade and bridge founding materials to inform suitable foundation design and appropriate protection to any exposed soil such as batter around bridge abutment. • Avoid constructing subgrade or foundation directly on dispersive and reactive soil. • Improve the subgrade layer by replacing the existing dispersive soil and reactive clay (immediate below the proposed subgrade or founding level) with imported granular fill materials for a nominal 200-300 mm thick layer.

Purposed Development	Relevant Geotechnical Work	Identified Geotechnical Risks	Comments and Discussions	Recommended Control Measures
				• Adopt lime treatment on the soil layers below the replaced fill if required by design. • Incorporate drainage collection and diversion system in the foundation design to ensure no waterlogging or ponding in and around the subgrade or foundation particularly if parts of the backfill around foundation are to be exposed. • Adopt high level compaction to the subgrade and foundation layers. • All finishes of soil layer should be vegetated to control surface runoff and minimise erosion risk.
	Re-use of site won materials	Soil erosion due to the dispersive nature of subsoil material if not managed properly	• Dispersive soils are highly susceptible to erosion when expose to water from rainfall or surface runoff.	• Recommend stripping off the topsoil for reuse for vegetation within site. • Apply capping layer to cover and protect the recycled subsoil when re-use on site during construction. • Alternatively, apply gypsum treatment to the subsoil. • Gypsum-modified subsoil can only be used outside of the road corridors.
Road Pavement	IN01 to IN03 RD-01-01 to RD-01-04	Instability of the road base due to the reuse of site won materials in the subgrade and site may be subject to potential high groundwater table given the site is close to Bruce Creek	• The soil profile across the site predominantly consists of a sandy layer overlying basaltic clay, with generally high plasticity and is prone to significant shrinkage and swelling. • Majority of the site is expected to be underlain by dispersive soil, with road section RD-01-01 located within the high erosion risk zone leading up to Bruce Creek.	• Conduct a ground investigation and laboratory testing to determine the characteristics of the subsurface soils and the depths to groundwater across the site. • Apply lime treatment on site won materials before reusing them for subgrade or capping layer. • Lime-modified materials should be compacted and tested to comply with DTP/VicRoads standards. • Limit batter slope to batters with gradient of 15%. Any slope steeper than 15% to be installed with erosion control mats.

Purposed Development	Relevant Geotechnical Work	Identified Geotechnical Risks	Comments and Discussions	Recommended Control Measures
Bridge crossing at Bruce Creek	BR-01	Instability of bridge abutment foundation and revetment batter due to dispersive soil	• Cutting and/or backfill around bridge abutment or spill through embankment that expose dispersive soils to surface runoff or water are prone to erosion and slope instability. • The bridge BR-01 is located within the high erosion risk zone.	• Conduct a ground investigation and laboratory testing to determine the characteristics of the subsurface soils, the depths to groundwater, thickness of the dispersive soils and depth to basalt rock. • Site walkover at the proposed bridge locations to inspect any signs of tunnel erosion on the riverbank, and possibly any existing slope protective works in the waterway. • Erosion control measures such as rock beaching, riprap or erosion control mats to protect the soil from further degradation. • Structural support such as soil nail or berms may be required to stabilise slope or embankment to satisfy long term stability depending on the investigation results and design requirement.
Steep slopes	RD-01-01, BR-01 (The western part of site and near Bruce Creek)	Dispersive soil result in soil erosion especially during heavy rainfall	• Soil wash-off or flooding in downslope can be expected due to the decrease in elevation from west to south-east during heavy rainfall.	• Recommend carrying out a surface runoff analysis to estimate the amount of water to be drained during heavy rainfall and assess the need of reprofiling the site to reduce slope gradient. • Apply lime treatment to stabilise dispersive soils in the steeper or more critical part of the slope. • Recommend improving surface cover protection such as rock/concrete barriers, geotextiles or vegetation to prevent soil from being washed away by rainwater.

Table 5: Sodic soil contingency application

Treatment Option	Percentage applied to projects	Intersections	Roads	Bridges
Provision of soil stabilisation using gypsum to subsoil and 150 mm of earth beneath topsoil	20%	Not applicable	RD-01-01	BR-01
Batter protection matting	100%	IN01 to IN03	RD-01-01 to RD-01-04	BR-01

Lime stabilisation for soil up to 0.5 m Back of kerb	100%	IN01 to IN03	RD-01-01 to RD-01-04	BR-01
200 mm capping layer	100%	IN01 to IN03	RD-01-01 to RD-01-04	BR-01

The Sodic Soil treatments have been applied to the project costings. Refer to Appendix C for information.

2.9 Cost Estimates

Cost estimates have been prepared based on rates from the benchmark rates from the VPA Benchmark Infrastructure Costings Report (2019) using P90 rates. The interim design is used as the basis for the costing. Costs were indexed in accordance with the VPA Benchmark Infrastructure Cost Guide. It should be noted that the indexing rate changed on July 1, 2025, and therefore have now been updated to reflect. Refer to Appendix C.

Cost estimates are provided to the Victorian Planning Authority for budgeting purposes only for the Infrastructure Contributions Plan. SMEC Australia assumed no liability for losses incurred through changes to the quantities required to 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.

Since the previous cost estimates were provided, there have been some changes to quantities and the total cost of projects. See below summary of the reasons for change:

- Landscaping has reduced based on landscaping areas to be limited to 3.0m either side of the paths or back kerb which is a more realistic approach. Site preparation areas have therefore also decreased.
- Street lighting is reduced at intersections due to updating the approach to correctly applying it per leg as opposed to the number of light poles
- Street lighting is increased for road costings due to updating the approach to correctly applying it per linear metre as opposed to the number of light poles

The above resulted in intersection costings being reduced by approximately 15%. This resulted in road projects generally being reduced by 10-15%.

Design Changes from previous submission

The design updates between the draft concept design and the final concept design submission are listed below:

- The “kink” in the Transmission Easement was confirmed to be incorrect. The easement provided by VPA was updated and the alignment of the East-West Link Road has been updated to suit.
- The offset from northern verge kerb line to easement is 6.0m immediately east of Burnside Road to allow for the development of the 3.5m wide left turn lanes at IN-01 and IN-02.
- Burnside Road Ultimate is now the interim design proposed with no allowance for parking.
- Pavement details have been provided in the drawing set.
- The Shared Path on BR-01 has adopted a “clear width” of 3.1m instead of 4.0 m as originally proposed at Draft Concept Design.

The design updates after the final concept design submission are listed below:

- Provided bridge elevation

The design updates after the draft cost estimates submission are listed below:

- Addition of SUP on the north side of the east-west arterial, west of IN-01 to the Bridge
- Shared path on the north side of the east-west link road, east of burnside road has been removed in the interim design
- A path connection from IN-03 to the existing path (gravel) has been added to provide better path connectivity in the interim stage.

Outstanding items

Through the development of the design, SMEC have identified several items that need to be confirmed by VPA. Additionally, there are items that SMEC will revise before the next submission. See below:

- VPA to confirm the final ROW boundary positions where they are interfacing with the high voltage transmission easement.
- The report does not provide a 1 in 100 Year Flood level therefore it has not been shown on the bridge elevation drawing. Given the significant height and cross-sectional area under the bridge there are not expected to be any impacts to the design, however future flood modelling is recommended to confirm the impacts (if any).

Appendix A Draft Concept Drawings

BANNOCKBURN SOUTH EAST PSP

DESIGN DRAWINGS

Controlled
Copy Issue
Number

Computer File: 30043502T--2000.dgn
Catalogue: General
Project: 30043502
Drawing No. 30043502T--2000

SHEET NUMBER	DRAWING NUMBER	TITLE BLOCK
1	30043502T--2000	COVER SHEET
2	30043502T--2100	DRAWING INDEX
3	30043502T--2200	PSP KEY PLAN
4	30043502T--2201	NOTES AND LEGEND
5	30043502T--2301	TYPICAL SECTIONS SHEET 1
6	30043502T--2302	TYPICAL SECTIONS SHEET 2
7	30043502T--2303	TYPICAL SECTIONS SHEET 3
	ALIGNMENT PLANS-INTERSECTION	
8	30043502T--3001	GENERAL ALIGNMNET PLAN IN-01
9	30043502T--3002	GENERAL ALIGNMNET PLAN IN-02
10	30043502T--3003	GENERAL ALIGNMNET PLAN IN-03
	ALIGNMENT PLAN-ROADS	
11	30043502T--5001	GENERAL ALIGNMNET PLAN RD-01-01
12	30043502T--5002	GENERAL ALIGNMNET PLAN RD-01-02
13	30043502T--5003	GENERAL ALIGNMNET PLAN RD-01-03
14	30043502T--5004	GENERAL ALIGNMNET PLAN RD-01-04 SHEET 1
15	30043502T--5005	GENERAL ALIGNMNET PLAN RD-01-04 SHEET 2
	ALIGNMENT PLANS-BRIDGE	
16	30043502T--6001	GENERAL ALIGNMENT PLAN BR-01
	ALIGNMENT LONGSECTION	
17	30043502T--7001	LONG SECTION MC01 SHEET 01
18	30043502T--7002	LONG SECTION MC01 SHEET 02
19	30043502T--7003	LONG SECTION MC01 SHEET 03
20	30043502T--7004	LONG SECTION MC01 SHEET 04
21	30043502T--7005	LONG SECTION MC01 SHEET 05
	TYPICAL DETAILS	
22	30043502T--8001	PAVEMENT PROFILES
	STRUCTURAL DETAILS	
23	30043502T--9001	BRIDGE ELEVATION

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE

APPROVED A DONATO

Date:

CAT:

PROJ:

FILE: 30043502T--2100.dgn

SCALE OF METRES

HOR

VER

Victorian Planning Authority

BANNOCKBURN SOUTH EAST PSP

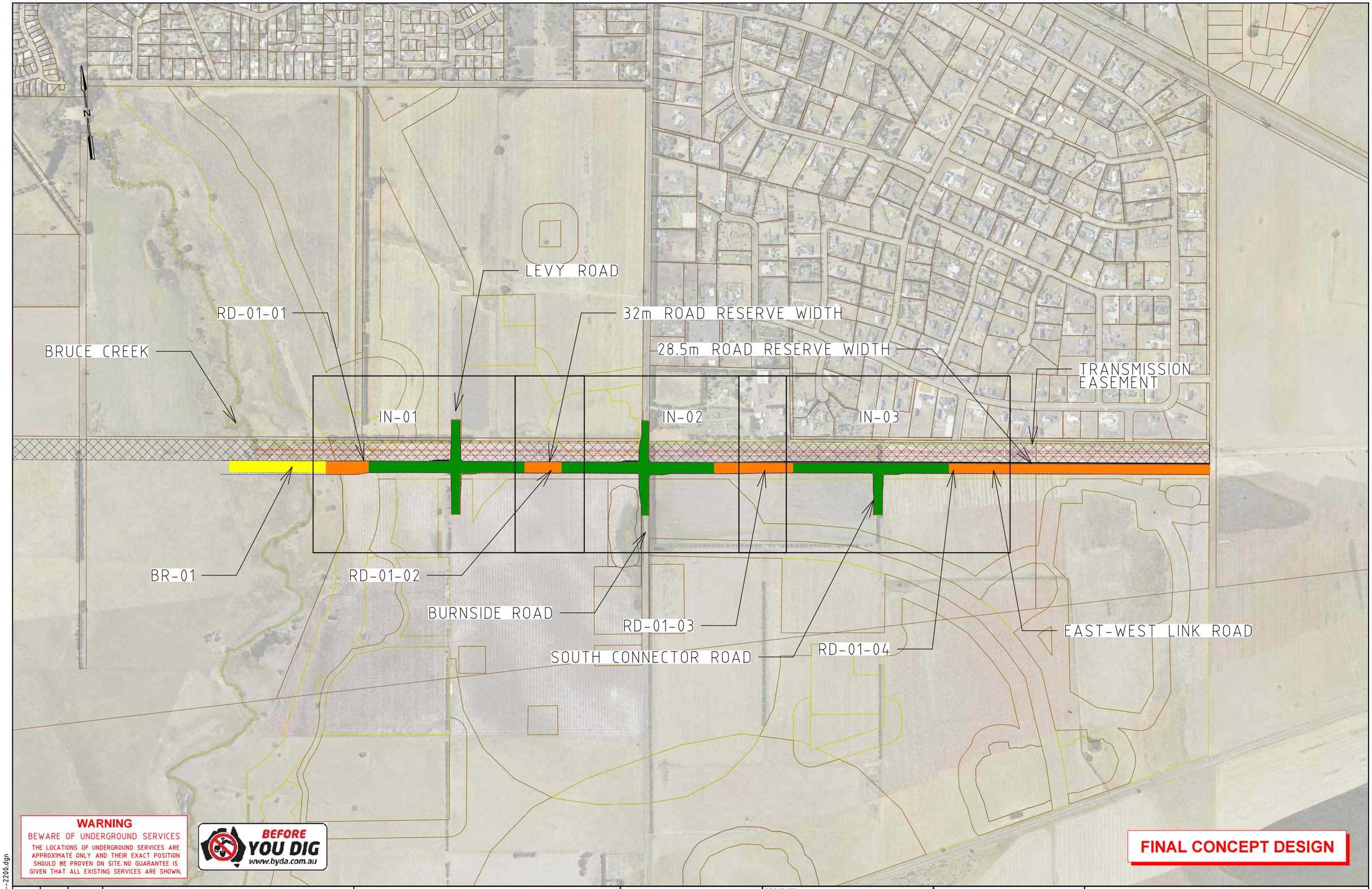
VICTORIAN PLANNING AUTHORITY

DRAWING INDEX

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	02	-2100	D

4/07/2025 12:21:34 PM Default 30043502T--2100.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--2100.dgn



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.

BEFORE YOU DIG www.byda.com.au

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE

APPROVED A DONATO

CAT:

PROJ:

FILE: 30043502T--2200.dgn

SCALE OF METRES HOR 0 100 200 VER

vpa Victorian Planning Authority

BANNOCKBURN SOUTH EAST PSP

VICTORIAN PLANNING AUTHORITY

PSP KEY PLAN

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	03	-2200	D

4/07/2025 12:21:35 PM Default 30043502T--2200.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--2200.dgn

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 BENCHARK 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. TYPICAL TRAFFIC LANE WIDTHS ARE 3.5m
7. SQUARE METRE AREAS SHOWN ON PLANS IS EQUAL TO THE TOTAL PROJECT AREA UP TO THE PROPOSED RIGHT OF WAY (ROW). THESE AREAS ARE SUBJECT TO CHANGE PENDING THE ACCEPTANCE OF THE PROPOSED ROW BOUNDARIES.

LEGEND:

- INTERIM LAYOUT
- ULTIMATE LAYOUT
- PROPOSED ROW BOUNDARY
- EXISTING ROW BOUNDARY
- CADASTRAL BOUNDARY
- INTERSECTION LIMIT OF WORKS
- ROADS LIMIT OF WORKS
- BRIDGE LIMIT OF WORKS
- TRANSMISSION EASEMENT

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

DESIGNED M CHRISTIE

APPROVED A DONATO

CAT:
PROJ:
FILE: 30043502T--2201.dgn

SCALE OF METRES
HOR
VER

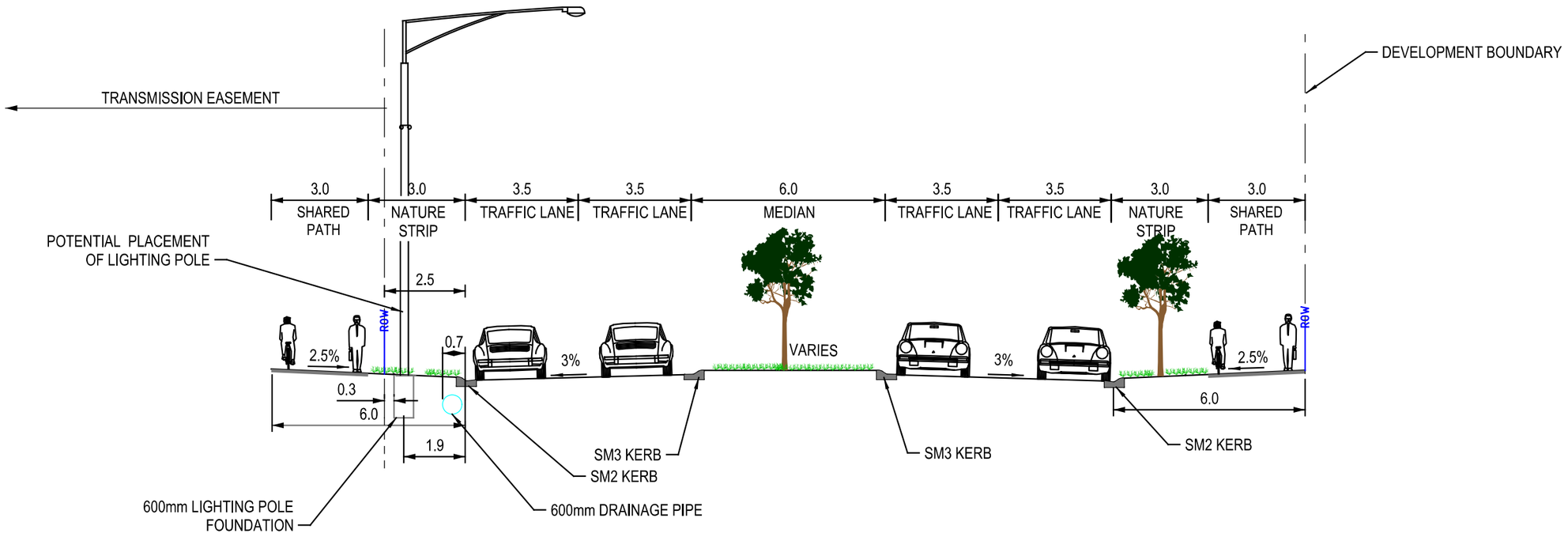
BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY

NOTES AND LEGEND

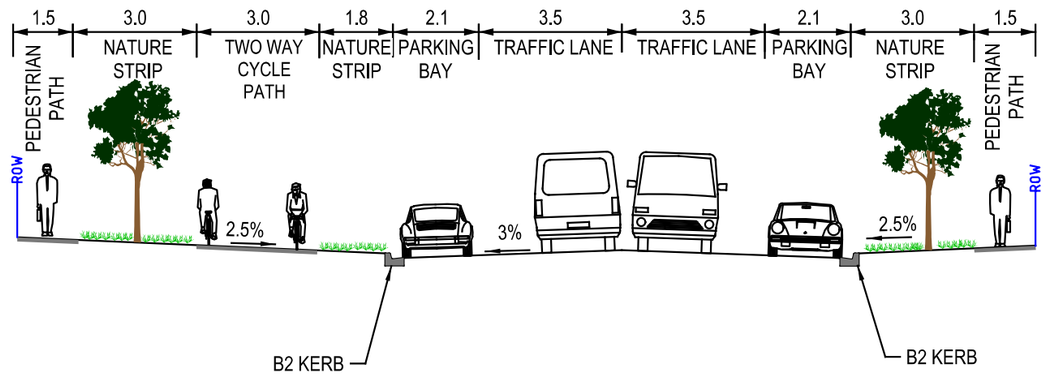
FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	04	-2201	D

4/07/2025 12:21:36 PM Default 30043502T--2201.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--2201.dgn



SECONDARY ARTERIAL 4 LANES
(EAST-WEST LINK ROAD)



CONNECTOR STREET
(LEVY ROAD, SOUTH CONNECTOR ROAD)

FINAL CONCEPT DESIGN

D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN
ISSUE	APP'D	DATE	AMENDMENT

GENERAL NOTES

DESIGNED M CHRISTIE

APPROVED A DONATO

CAT:

PROJ:

FILE: 30043502T--2301.dgn

SCALE OF METRES HOR 0 0.5 1 VER

BANNOCKBURN SOUTH EAST PSP

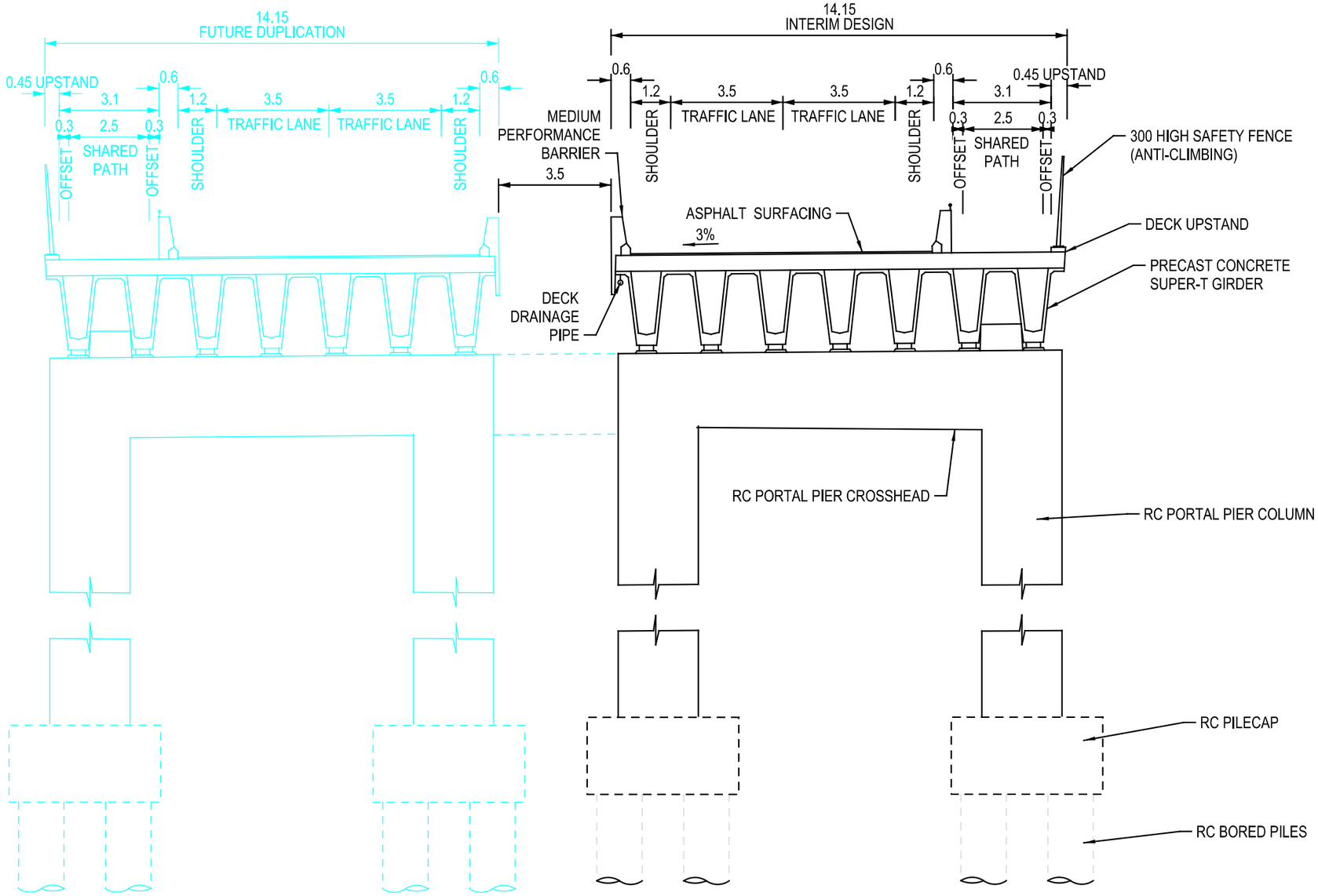
VICTORIAN PLANNING AUTHORITY

TYPICAL SECTIONS SHEET 1

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	05	-2301	D

4/07/2025 12:21:36 PM Default 30043502T--2301.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--2301.dgn



BR-01 TYPICAL SECTION

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE
APPROVED A DONATO
CAT:
PROJ:
FILE: 30043502T--2302.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 0.5 1
VER

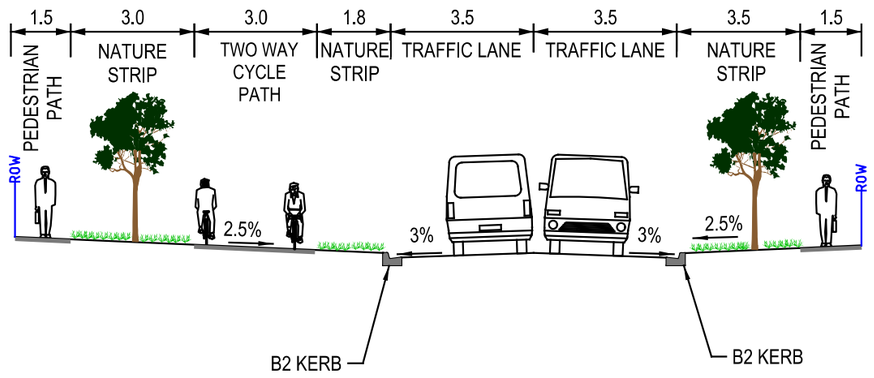
BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY

TYPICAL SECTIONS SHEET 2

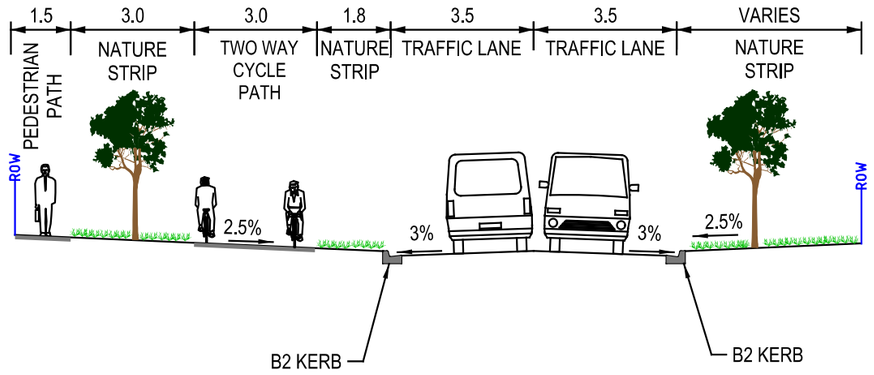
FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	06	-2302	D

4/07/2025 12:21:36 PM Default 30043502T--2302.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--2302.dgn



BURNSIDE ROAD SOUTH OF INTERSECTION



BURNSIDE ROAD NORTH OF INTERSECTION

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
C	AD	04.07.25	FINAL CONCEPT DESIGN
B	AD	26.05.25	FINAL CONCEPT DESIGN
A	AD	30.04.25	FINAL CONCEPT DESIGN

GENERAL NOTES

DESIGNED M CHRISTIE
APPROVED A DONATO
CAT:
PROJ:
FILE: 30043502T--2303.dgn

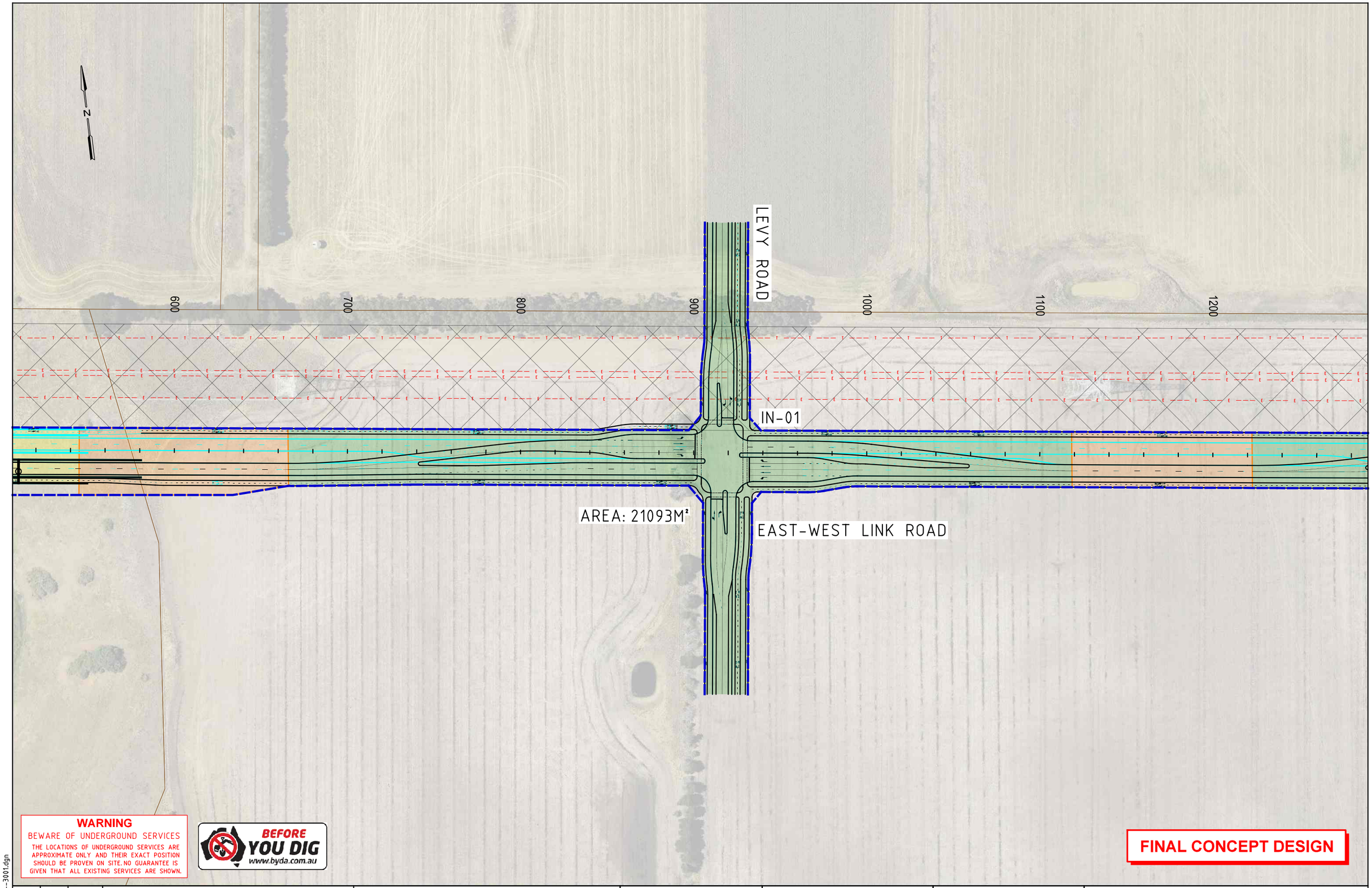
SCALE OF METRES
HOR 0 0.5 1
VER

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
TYPICAL SECTIONS SHEET 3

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	07	-2303	C

4/07/2025 12:21:36 PM Default 30043502T--2303.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--2303.dgn



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.

BEFORE YOU DIG www.byda.com.au

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE
APPROVED A DONATO
CAT:
PROJ:
FILE: 30043502T--3001.dgn

Victorian Planning Authority

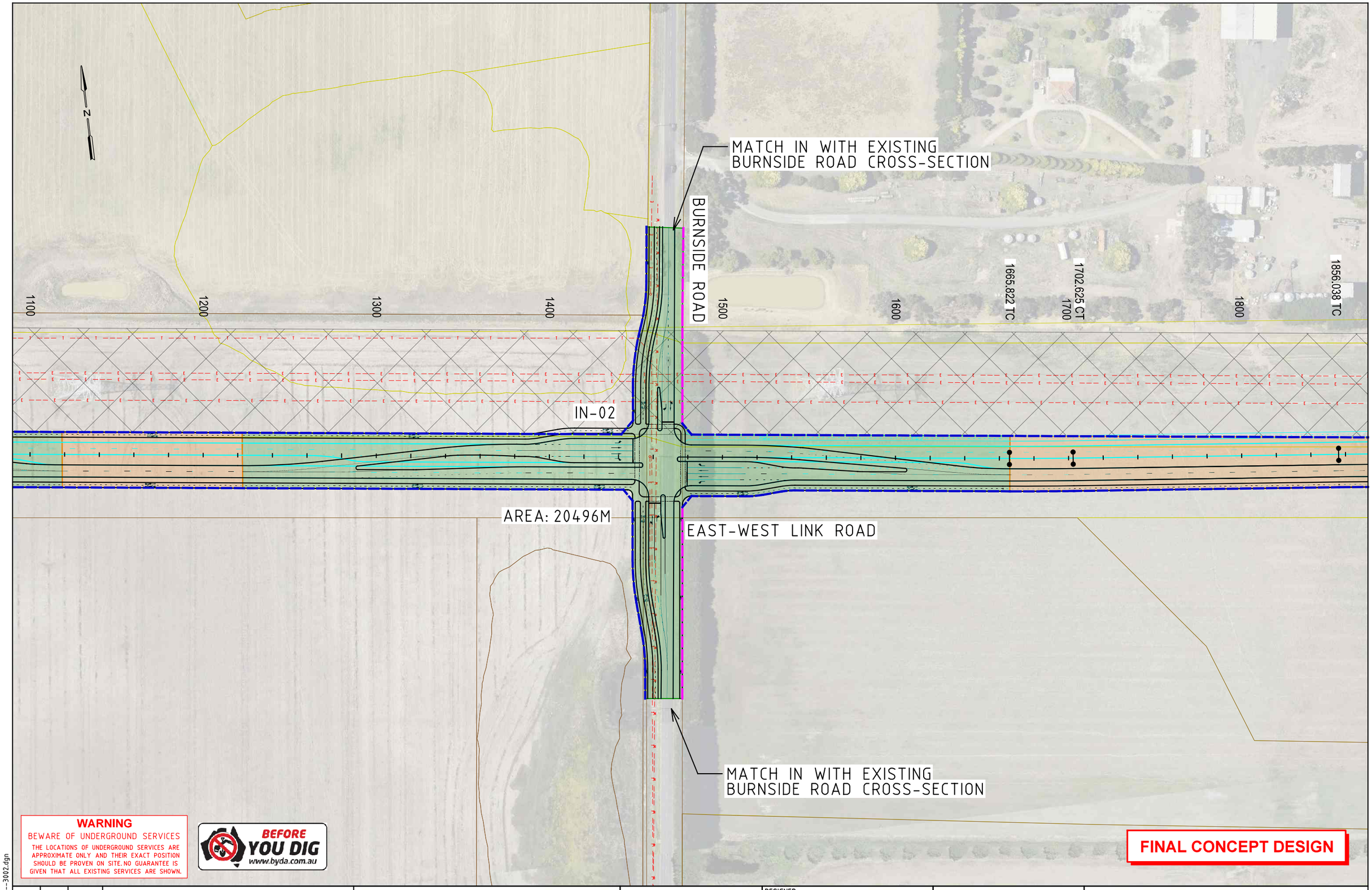
SCALE OF METRES
HOR 0 20 40
VER

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
GENERAL ALIGNMENT PLAN
IN-01

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	08	-3001	D

4/07/2025 12:21:37 PM Default 30043502T--3001.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--3001.dgn



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.

BEFORE YOU DIG www.byda.com.au

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE

APPROVED A DONATO

CAT:

PROJ:

FILE: 30043502T--3002.dgn

SCALE OF METRES
HOR 0 20 40
VER

Victorian Planning Authority

BANNOCKBURN SOUTH EAST PSP

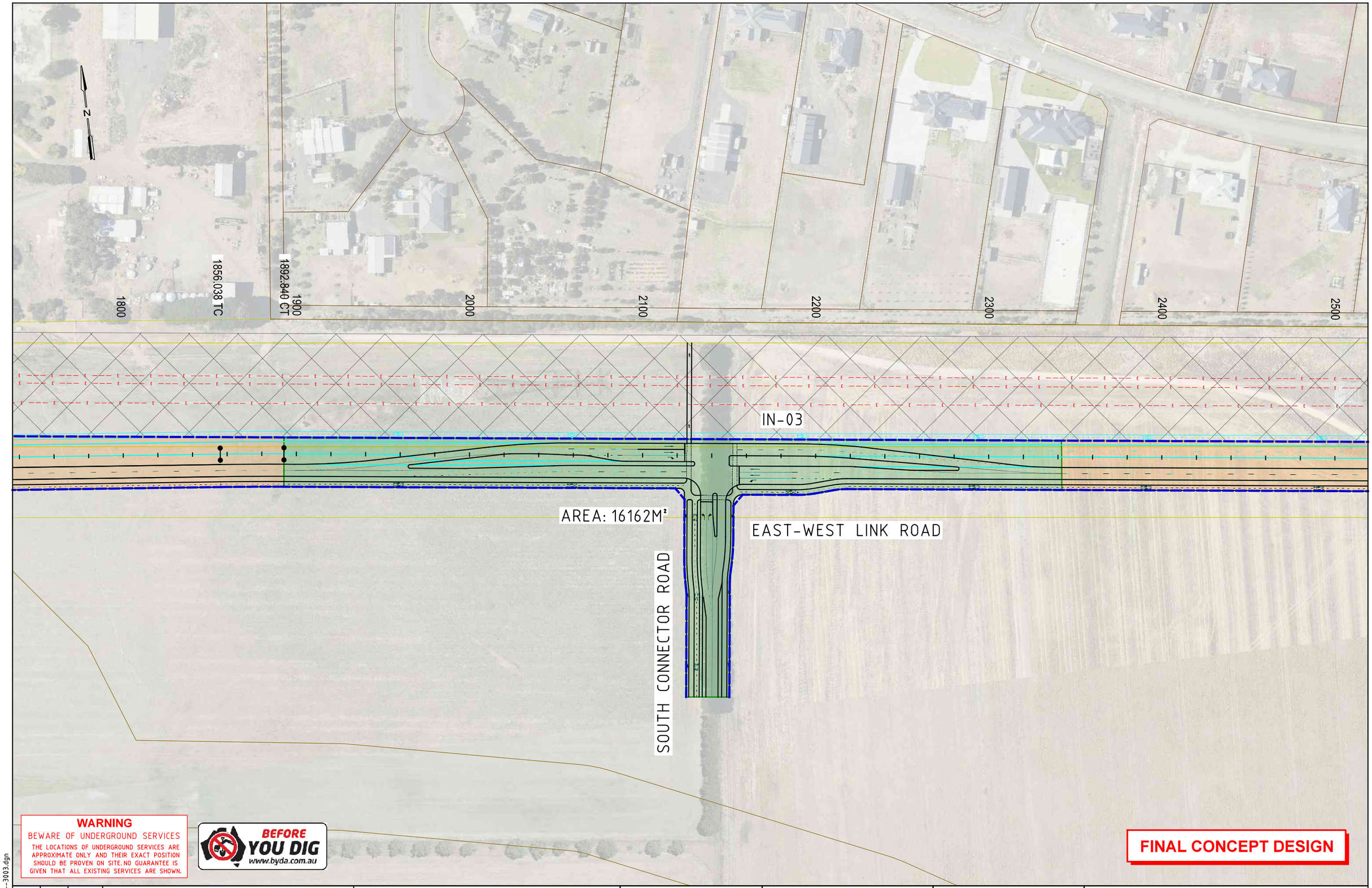
VICTORIAN PLANNING AUTHORITY

GENERAL ALIGNMENT PLAN
IN-02

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	09	-3002	D

4/07/2025 12:21:38 PM Default 30043502T--3002.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--3002.dgn



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.

BEFORE YOU DIG www.byda.com.au

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	30.04.25	FINAL CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE

APPROVED A DONATO

CAT:

PROJ:

FILE: 30043502T--3003.dgn

VER

SCALE OF METRES HOR 0 20 40

Victorian Planning Authority

BANNOCKBURN SOUTH EAST PSP

VICTORIAN PLANNING AUTHORITY

GENERAL ALIGNMENT PLAN IN-03

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	10	-3003	D

4/07/2025 12:21:39 PM Default 30043502T--3003.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--3003.dgn

N

300 400 500 600 700 800 900 1000

RD-01-01

EAST-WEST LINK ROAD

AREA: 4582M²

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.

BEFORE YOU DIG www.byda.com.au

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE

APPROVED A DONATO

CAT:

PROJ:

FILE: 30043502T--5001.dgn

SCALE OF METRES HOR 0 20 40 VER

Victorian Planning Authority

BANNOCKBURN SOUTH EAST PSP

VICTORIAN PLANNING AUTHORITY

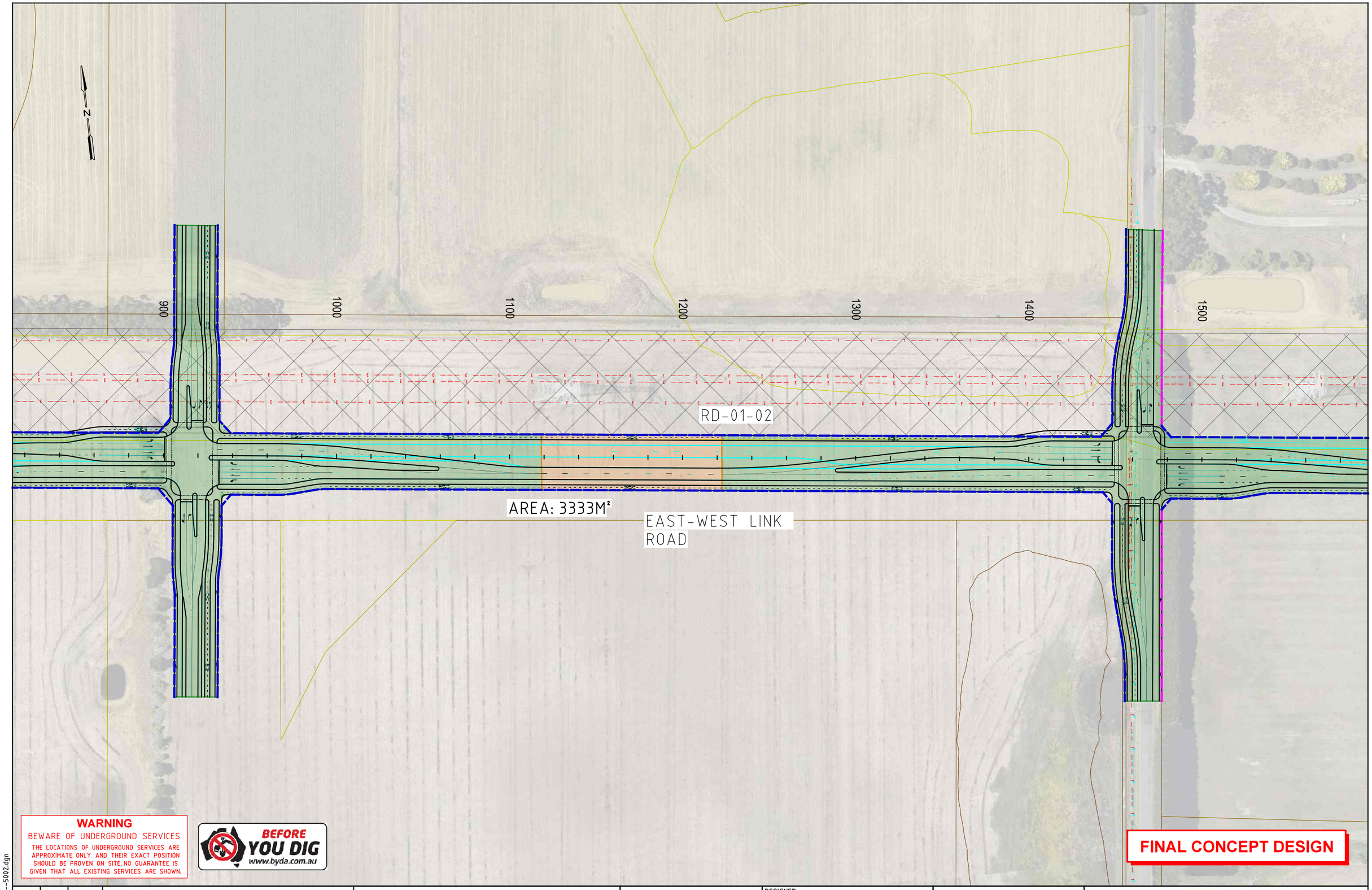
GENERAL ALIGNMENT PLAN

RD-01-01

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	11	-5001	D

4/07/2025 12:21:39 PM Default 30043502T--5001.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--5001.dgn



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.

BEFORE YOU DIG www.byda.com.au

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE
APPROVED A DONATO
CAT:
PROJ:
FILE: 30043502T--5002.dgn

Victorian Planning Authority

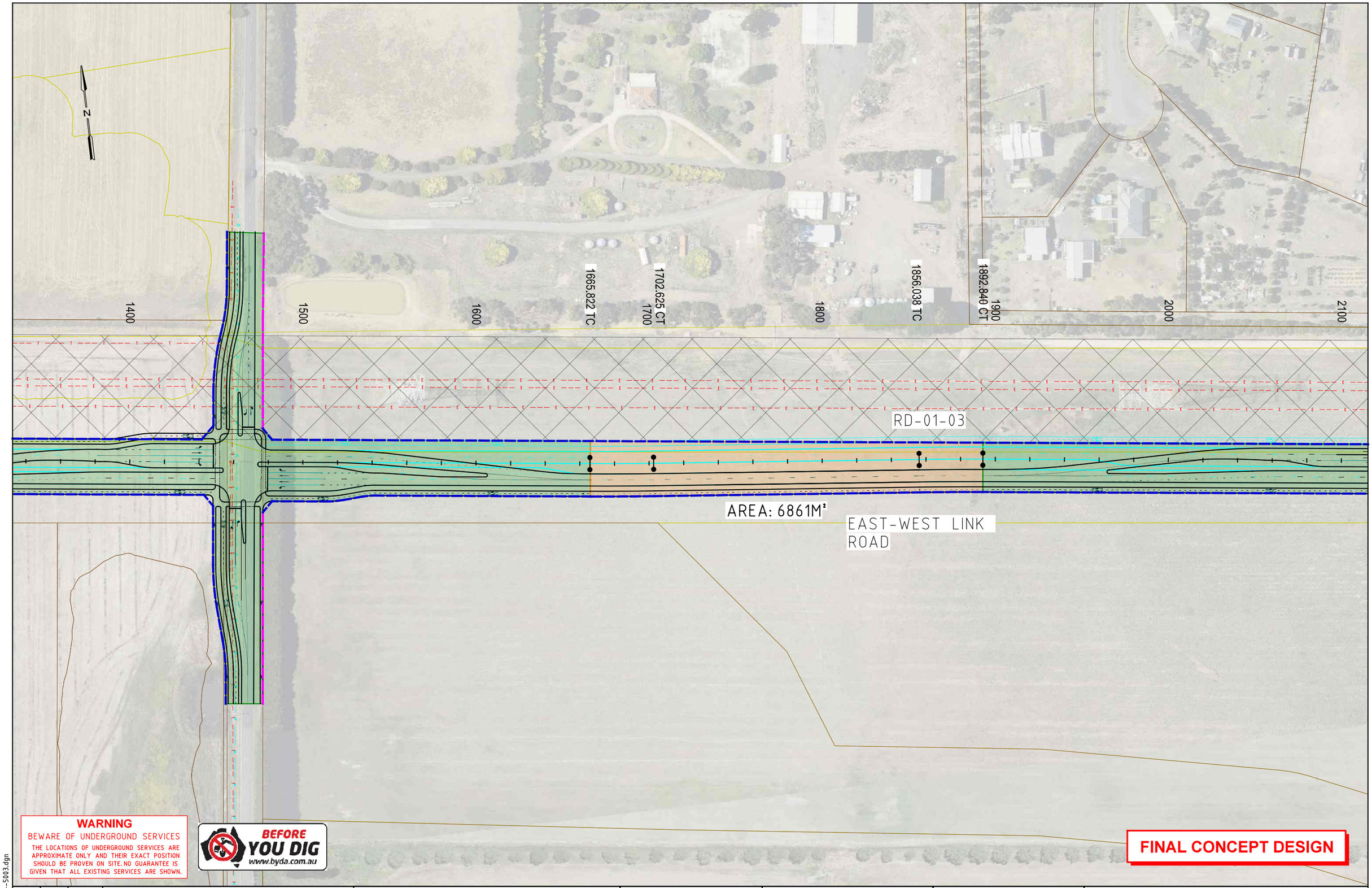
SCALE OF METRES
HOR 0 20 40
VER

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
GENERAL ALIGNMENT PLAN
RD-01-02

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	12	-5002	D

4/07/2025 12:21:40 PM Default 30043502T--5002.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--5002.dgn



ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE
APPROVED A DONATO
CAT:
PROJ:
FILE: 30043502T--5003.dgn

Victorian Planning Authority

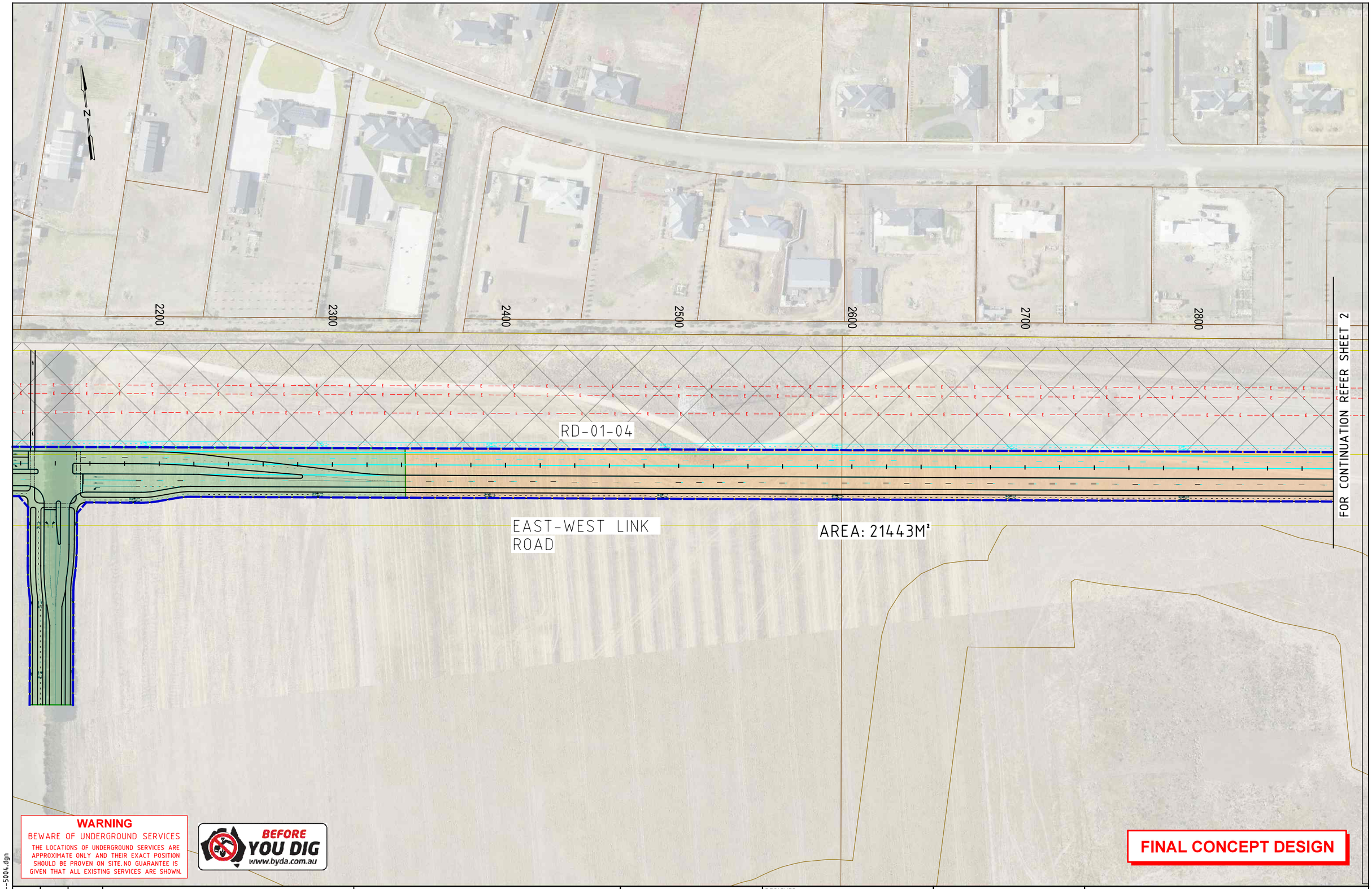
SCALE OF METRES
HOR 0 20 40
VER

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
GENERAL ALIGNMENT PLAN
RD-01-03

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	13	-5003	D

4/07/2025 12:21:41 PM Default 30043502T--5003.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--5003.dgn



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.

BEFORE YOU DIG www.byda.com.au

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE
APPROVED A DONATO
CAT:
PROJ:
FILE: 30043502T--5004.dgn

Victorian Planning Authority

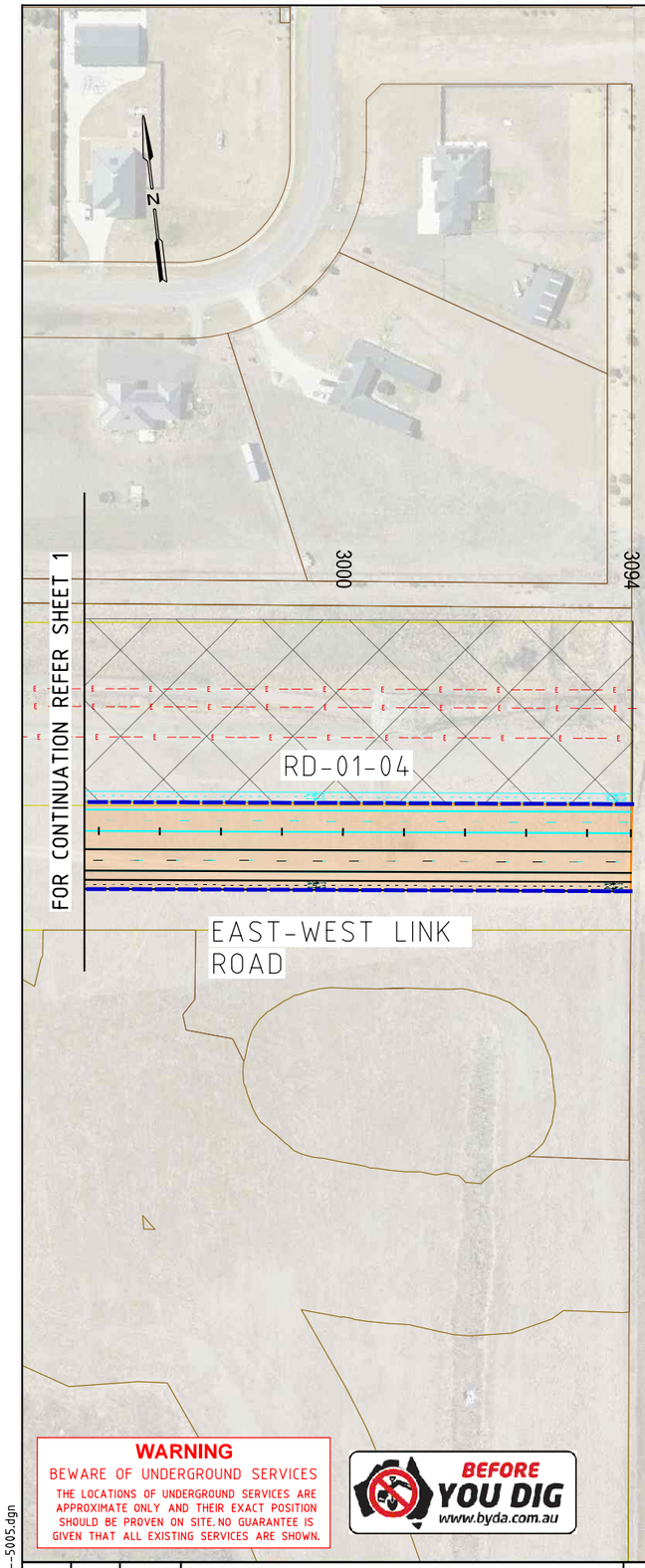
SCALE OF METRES
HOR 0 20 40
VER

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
GENERAL ALIGNMENT PLAN
RD-01-04 SHEET 1

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	14	-5004	D

4/07/2025 12:21:41 PM Default 30043502T--5004.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--5004.dgn



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.

BEFORE YOU DIG www.byda.com.au

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE

APPROVED A DONATO

CAT:

PROJ:

FILE: 30043502T--5005.dgn

SCALE OF METRES HOR 0 20 40 VER

Victorian Planning Authority

BANNOCKBURN SOUTH EAST PSP

VICTORIAN PLANNING AUTHORITY

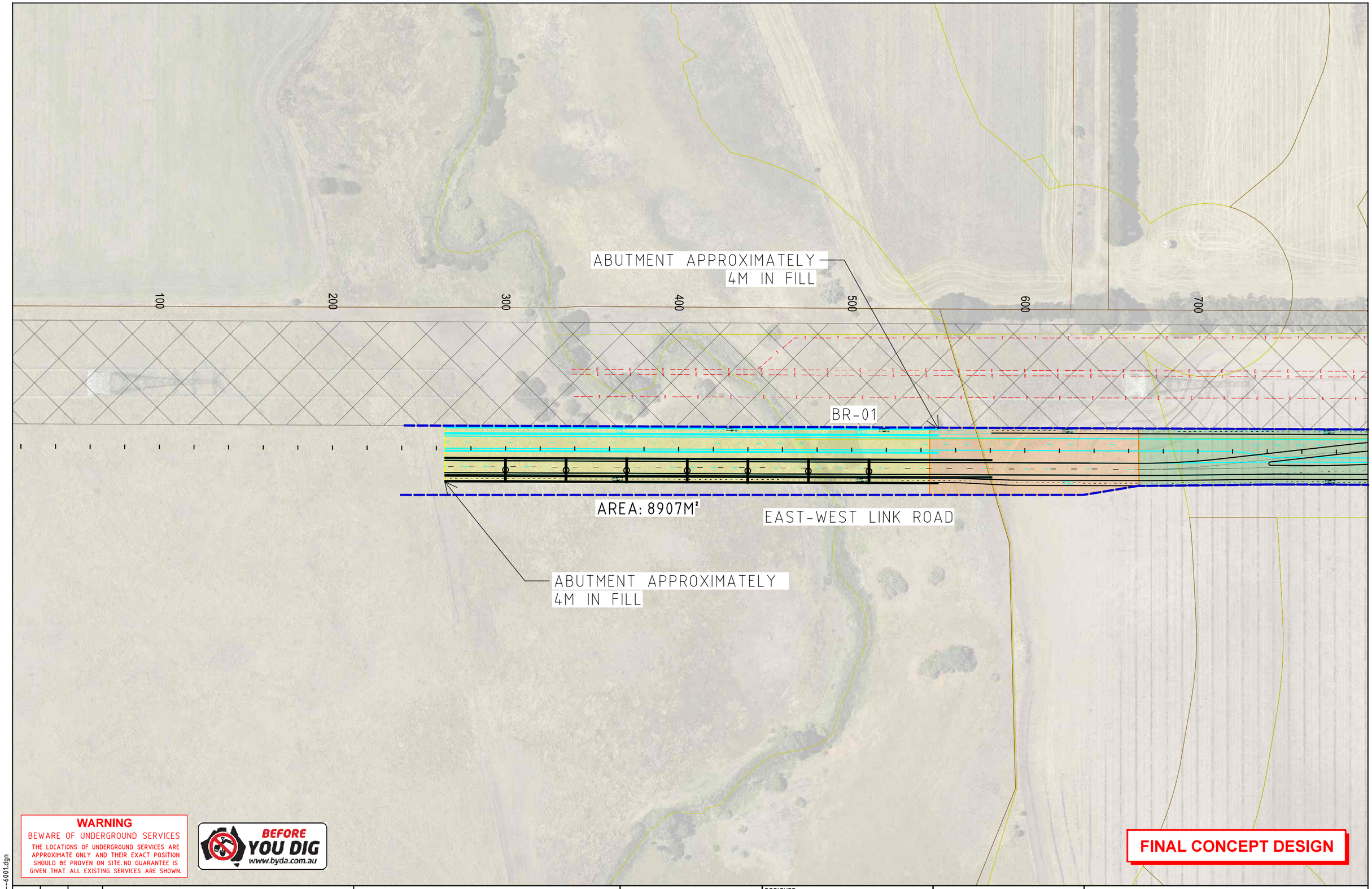
GENERAL ALIGNMENT PLAN

RD-01-04 SHEET 2

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	15	-5005	D

4/07/2025 12:21:42 PM Default 30043502T--5005.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--5005.dgn



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.

BEFORE YOU DIG www.byda.com.au

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE

APPROVED A DONATO

CAT:

PROJ:

FILE: 30043502T--6001.dgn

SCALE OF METRES HOR 0 10 20 VER

Victorian Planning Authority

BANNOCKBURN SOUTH EAST PSP

VICTORIAN PLANNING AUTHORITY

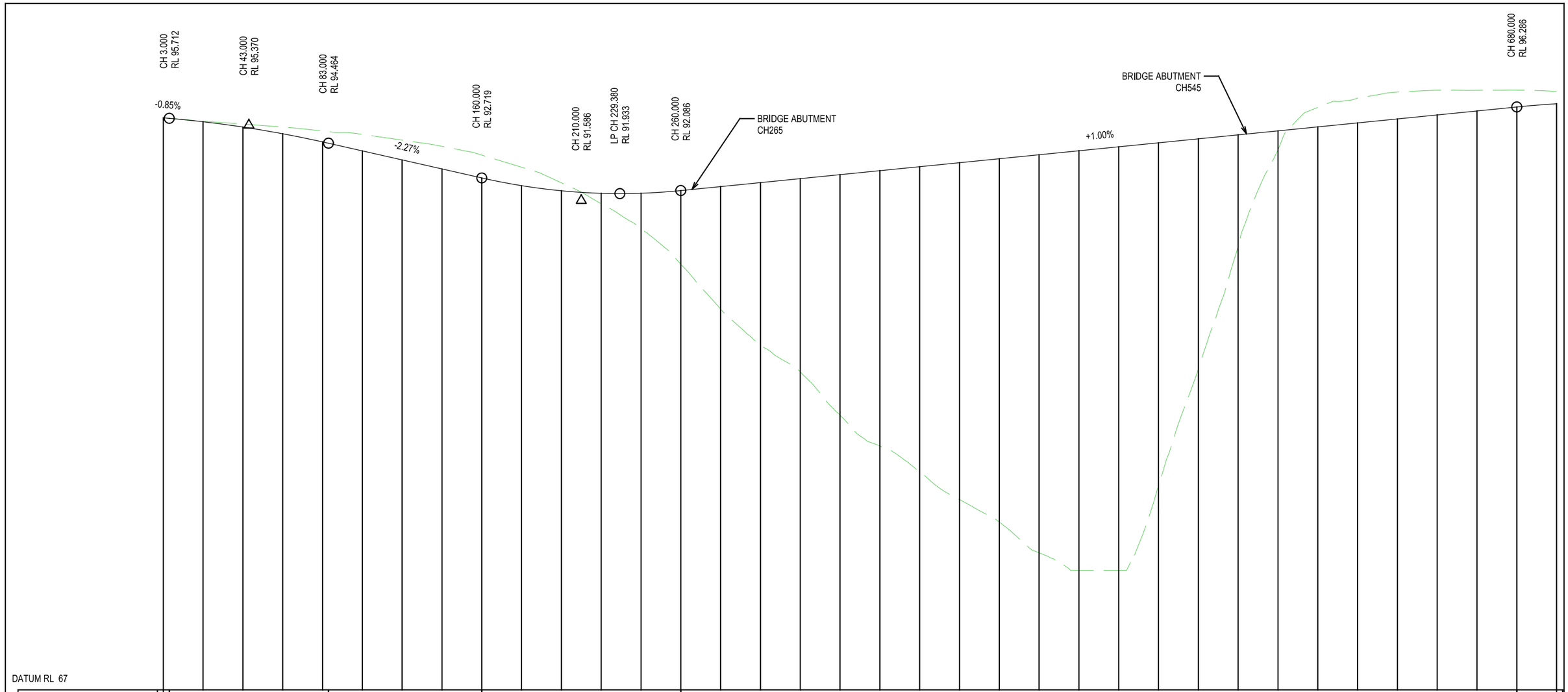
GENERAL ALIGNMENT PLAN

BR-01

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	16	-6001	D

4/07/2025 12:21:42 PM Default 30043502T--6001.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--6001.dgn



CHAINAGE	CUT / FILL	DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS
0.002 3.000	0.000	95.737	95.737
20	0.028	95.541	95.569
40 43.000	0.153	95.275	95.428
60	0.336	94.938	95.275
80 83.000	0.549	94.531	95.080
100	0.830	94.078	94.909
120	0.993	93.625	94.618
140	1.135	93.172	94.308
160.000	1.146	92.719	93.865
180	0.925	92.331	93.256
200	0.400	92.074	92.474
210.000			
220	-0.523	91.947	91.425
229.380			
240	-1.775	91.951	90.176
260.000	-3.702	92.086	88.384
280	-6.153	92.286	86.133
300	-8.159	92.486	84.327
320	-9.703	92.686	82.983
340	-12.080	92.886	80.806
360	-13.832	93.086	79.254
380	-15.302	93.286	77.984
400	-16.927	93.486	76.559
420	-18.250	93.686	75.436
440	-20.000	93.886	73.886
460	-21.086	94.086	73.000
480	-21.286	94.286	73.000
500	-17.231	94.486	77.255
520	-11.576	94.686	83.110
540	-5.570	94.886	89.316
560	-0.959	95.086	94.127
580	0.976	95.286	96.262
600	1.244	95.486	96.729
620	1.347	95.686	97.033
640	1.239	95.886	97.125
660	1.036	96.086	97.122
680.000	0.841	96.286	97.127
700.002	0.613	96.446	97.059

LONGITUDINAL SECTION MC07

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED
M CHRISTIE

APPROVED
A DONATO

CAT:
PROJ:
FILE: 30043502T--7001.dgn

vpa Victorian Planning Authority

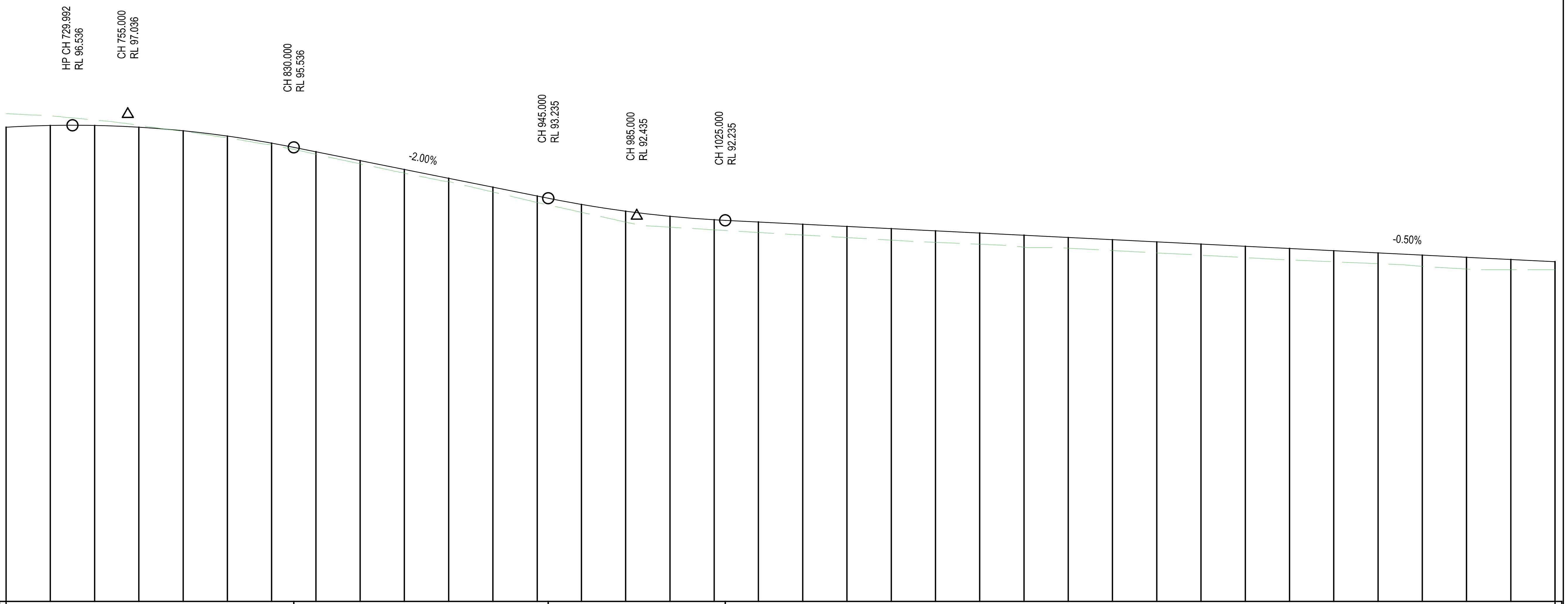
SCALE OF METRES
HOR 0 10 20
VER 0 2 4

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
LONG SECTION
MC01 SHEET 01

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	17	-7001	D

4/07/2025 12:21:43 PM Default 30043502T--7001.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--7001.dgn



DATUM RL 75

VERTICAL ALIGNMENT: K = -49.992, L = 150.000 | G=-2.00%, L = 115.000 | K = 53.316, L = 80.000 | G=-0.50%, L = 615.000

HORIZONTAL ALIGNMENT: L = 1665.822

CHAINAGE	CUT / FILL	DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS
700.002	0.613	96.446	97.059
720	0.432	96.526	96.958
729.992			
740	0.243	96.526	96.769
755.000			
760	0.090	96.446	96.536
780	-0.030	96.286	96.256
800	-0.082	96.046	95.964
820	-0.086	95.726	95.640
830.000			
840	-0.109	95.336	95.226
860	-0.145	94.935	94.791
880	-0.163	94.535	94.372
900	-0.146	94.135	93.990
920	-0.218	93.735	93.517
940	-0.295	93.335	93.040
945.000			
960	-0.359	92.956	92.597
980	-0.494	92.650	92.156
985.000			
1000	-0.493	92.418	91.925
1020	-0.456	92.262	91.806
1025.000			
1040	-0.473	92.160	91.687
1060	-0.489	92.060	91.571
1080	-0.505	91.960	91.455
1100	-0.521	91.860	91.339
1120	-0.521	91.760	91.239
1140	-0.505	91.660	91.155
1160	-0.540	91.560	91.019
1180	-0.481	91.460	90.978
1200	-0.489	91.360	90.871
1220	-0.497	91.260	90.763
1240	-0.504	91.160	90.656
1260	-0.513	91.060	90.547
1280	-0.515	90.960	90.445
1300	-0.501	90.860	90.359
1320	-0.487	90.760	90.273
1340	-0.506	90.660	90.154
1360	-0.532	90.560	90.028
1380	-0.460	90.460	90.000
1400.002	-0.360	90.360	90.000

LONGITUDINAL SECTION MC07

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED
M CHRISTIE

APPROVED
A DONATO

CAT:
PROJ:
FILE: 30043502T--7002.dgn

vpa
Victorian Planning Authority

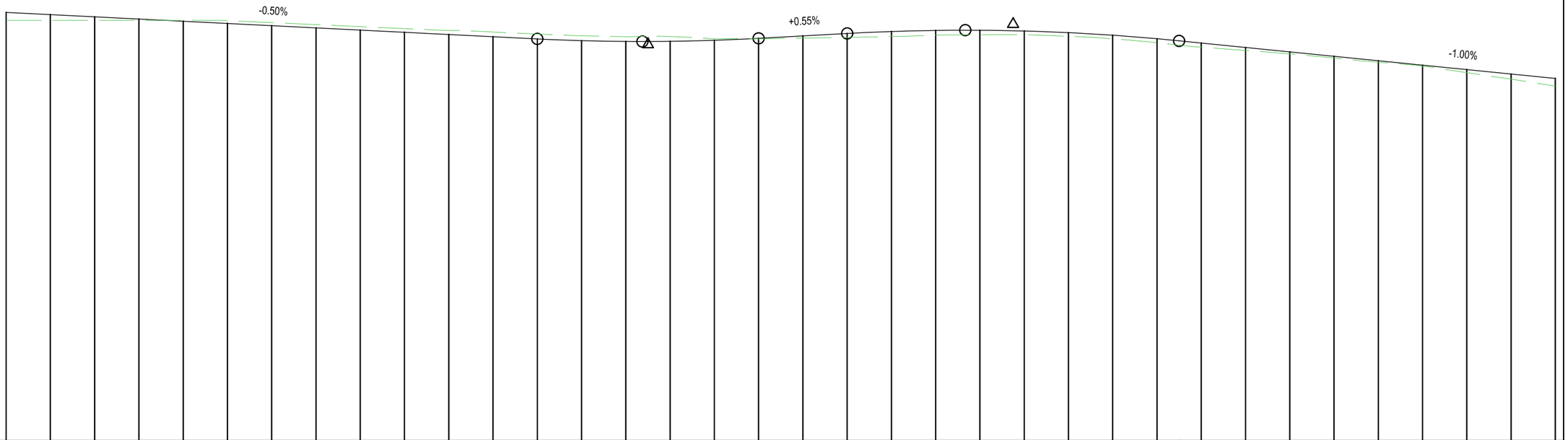
SCALE OF METRES
HOR 0 10 20
VER 0 2 4

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
LONG SECTION
MC01 SHEET 02

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	18	-7002	D

4/07/2025 12:21:43 PM Default 30043502T--7002.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--7002.dgn



VERTICAL ALIGNMENT: G=-0.50% L = 615.000 | K = 95.038 L = 100.000 | G=0.55% L = 40.000 | K = -96.637 L = 150.000 | G=-1.00% L = 255.000

HORIZONTAL ALIGNMENT: L = 1665.822 | R = 2000.000 L = 36.802 | L = 153.413 | R = 2000.000 L = 36.802 | L = 1201.515

CHAINAGE	CUT / FILL	DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS
1400.002	-0.360	90.360	90.000
1420	-0.260	90.260	90.000
1440	-0.160	90.160	90.000
1460	-0.060	90.060	90.000
1480	0.040	89.960	90.000
1500	0.129	89.860	89.988
1520	0.138	89.760	89.898
1540	0.148	89.660	89.807
1560	0.157	89.560	89.717
1580	0.167	89.460	89.627
1600	0.186	89.360	89.545
1620	0.210	89.260	89.470
1640.000	0.222	89.160	89.381
1660	0.218	89.081	89.299
1665.822			
1680	0.216	89.044	89.260
1687.519			
1690.000			
1700	0.214	89.049	89.264
1702.625			
1720	0.068	89.097	89.165
1740.000	-0.025	89.186	89.161
1760	-0.098	89.296	89.198
1780.000	-0.177	89.407	89.229
1800	-0.220	89.497	89.276
1820	-0.218	89.545	89.327
1833.363			
1840	-0.205	89.552	89.347
1855.000			
1856.038			
1860	-0.174	89.517	89.343
1880	-0.164	89.442	89.278
1892.840			
1900	-0.162	89.324	89.163
1920	-0.185	89.166	88.981
1930.000			
1940	-0.181	88.971	88.790
1960	-0.137	88.771	88.634
1980	-0.088	88.571	88.483
2000	-0.076	88.371	88.295
2020	-0.061	88.171	88.110
2040	-0.046	87.971	87.925
2060	-0.134	87.771	87.637
2080	-0.232	87.571	87.339
2100.002	-0.343	87.371	87.028

LONGITUDINAL SECTION MC07

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED
M CHRISTIE

APPROVED
A DONATO

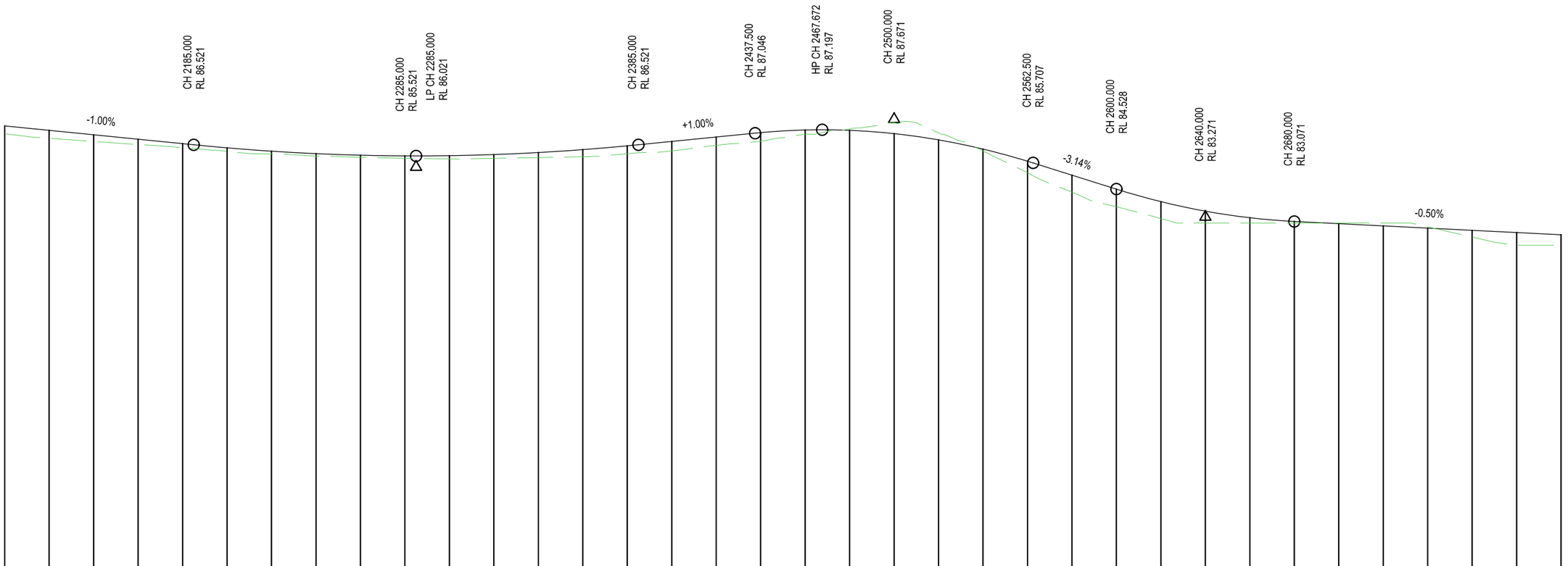
CAT:
PROJ:
FILE: 30043502T--7003.dgn

vpa
Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
LONG SECTION
MC01 SHEET 03

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	19	-7003	D



DATUM RL 67

VERTICAL ALIGNMENT	G=-1.00% L = 255.000	K = 100.000 L = 200.000	G=1.00% L = 52.500	K = -30.172 L = 125.000	G=-3.14% L = 37.500	K = 30.270 L = 80.000	G=-0.50% L = 305.000
HORIZONTAL ALIGNMENT	L = 1201.515						

CHAINAGE	2100.002	2120	2140	2160	2180 2185.000	2200	2220	2240	2260	2280 2285.000	2300	2320
CUT / FILL	-0.343	-0.354	-0.297	-0.234	-0.176	-0.154	-0.125	-0.114	-0.091	-0.106	-0.144	-0.170
DESIGN SURFACE LEVELS	87.371	87.171	86.971	86.771	86.571	86.382	86.232	86.122	86.052	86.022	86.032	86.082
EXISTING SURFACE LEVELS	87.028	86.817	86.674	86.537	86.395	86.228	86.107	86.008	85.961	85.916	85.888	85.912

CHAINAGE	2340	2360	2380 2385.000	2400	2420	2437.500 2440	2460 2467.672	2480	2500.000	2520	2540	2560 2562.500
CUT / FILL	-0.223	-0.315	-0.352	-0.420	-0.376	-0.386	-0.187	0.068	0.503	0.317	-0.082	-0.518
DESIGN SURFACE LEVELS	86.172	86.302	86.472	86.671	86.871	87.070	87.187	87.172	87.024	86.743	86.330	85.784
EXISTING SURFACE LEVELS	85.950	85.987	86.120	86.251	86.495	86.684	87.000	87.240	87.527	87.060	86.247	85.266

CHAINAGE	2580	2600.000	2620	2640.000	2660	2680.000	2700	2720	2740	2760	2780	2800.002
CUT / FILL	-0.757	-0.798	-0.766	-0.535	-0.237	-0.071	0.029	0.129	0.054	-0.304	-0.571	-0.471
DESIGN SURFACE LEVELS	85.157	84.528	83.966	83.535	83.237	83.071	82.971	82.871	82.771	82.671	82.571	82.471
EXISTING SURFACE LEVELS	84.400	83.730	83.199	83.000	83.000	83.000	83.000	83.000	82.825	82.367	82.000	82.000

LONGITUDINAL SECTION MC07

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED
M CHRISTIE

APPROVED
A DONATO

CAT:
PROJ:
FILE: 30043502T--7004.dgn

Victorian Planning Authority

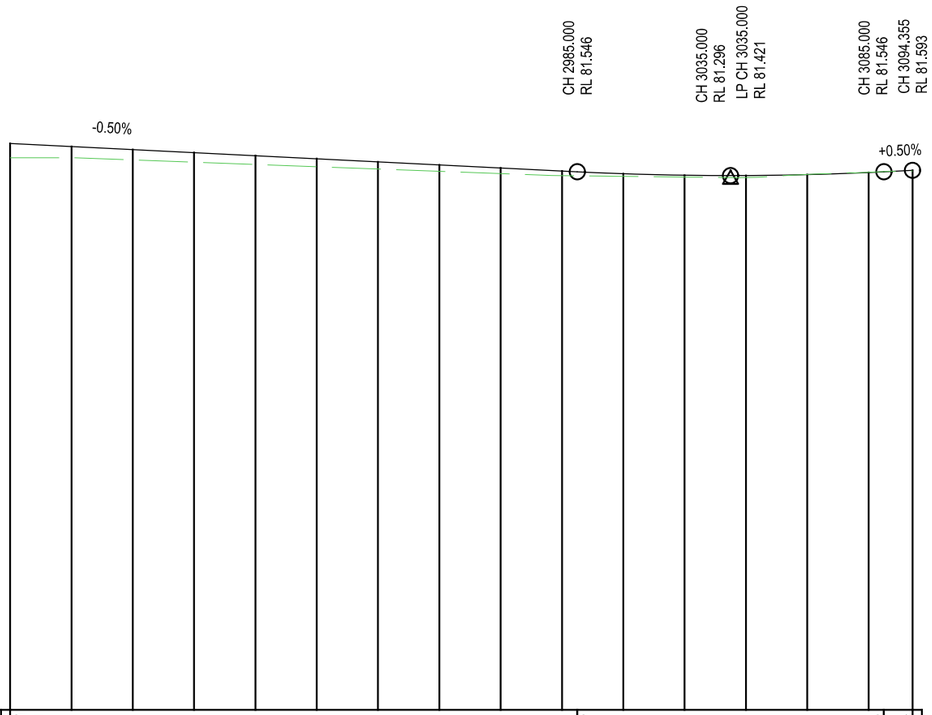
SCALE OF METRES
HOR 0 10 20
VER 0 2 4

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
LONG SECTION
MC01 SHEET 04

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	20	-7004	D

4/07/2025 12:21:44 PM Default 30043502T--7004.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--7004.dgn



DATUM RL 64

VERTICAL ALIGNMENT	G=-0.50% L = 305.000										K = 100.000 L = 100.000				G=0.50% L = 9.355	
HORIZONTAL ALIGNMENT	L = 1201.515															
CUT / FILL	-0.471	-0.371	-0.341	-0.314	-0.288	-0.262	-0.236	-0.209	-0.183	-0.150	-0.086	-0.060	-0.065	0.004	0.006	-0.020
DESIGN SURFACE LEVELS	82.471	82.371	82.271	82.171	82.071	81.971	81.871	81.771	81.671	81.571	81.482	81.432	81.422	81.452	81.522	81.593
EXISTING SURFACE LEVELS	82.000	82.000	81.930	81.857	81.783	81.709	81.635	81.562	81.488	81.421	81.397	81.373	81.357	81.456	81.528	81.573
CHAINAGE	2800.002	2820	2840	2860	2880	2900	2920	2940	2960	2980	2985.000	3000	3020	3035.000	3040	3060	3080	3085.000	3094.355

LONGITUDINAL SECTION MC07

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
D	AD	04.07.25	FINAL CONCEPT DESIGN
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE
APPROVED A DONATO
CAT:
PROJ:
FILE: 30043502T--7005.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER 0 2 4

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
LONG SECTION
MC01 SHEET 05

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	21	-7005	D

4/07/2025 12:21:44 PM Default 30043502T--7005.dgn

ARTERIAL ROAD
PAVEMENT TYPE 1: NEW DEEP STRENGTH ASPHALT PAVEMENT (INDICATIVE)

PAVEMENT LAYER		LAYER THICKNESS (mm)	MATERIAL
A	WEARING COURSE	40	SIZE 14mm TYPE V (C320) ASPHALT (INTERSECTION) SIZE 14mm TYPE H (C320) ASPHALT (MIDBLOCK)
B	INTERMEDIATE COURSE	75	SIZE 20mm TYPE SI ASPHALT
C	BASE COURSE	75	SIZE 20mm TYPE SI ASPHALT
D	UPPER SUBBASE	180	CEMENT TREATED CRUSHED ROCK (CTCR) (E=500 MPa); OR CEMENT TREATED CRUSHED CONCRETE (CTCC) (E=500 MPa)
E	LOWER SUBBASE	150	CLASS 4 CRUSHED ROCK (E ≥ 150MPa); OR CLASS 4 RECYCLED CRUSHED CONCRETE (E ≥ 150MPa)
F	CAPPING LAYER (IF REQUIRED)	150	TYPE A CAPPING MATERIAL (CBR ≥ 6%, K ≤ 5E-09M/SEC)
	TOTAL DEPTH	**670**	SUBGRADE DCBR TO BE CONFIRMED

CONNECTOR ROAD
PAVEMENT TYPE 2: NEW FULL DEPTH ASPHALT PAVEMENT (INDICATIVE)

PAVEMENT LAYER		LAYER THICKNESS (mm)	MATERIAL
A	WEARING COURSE	40	SIZE 14mm TYPE V (C320) ASPHALT (INTERSECTION) SIZE 14mm TYPE H (C320) ASPHALT (MIDBLOCK)
B	INTERMEDIATE COURSE	60	SIZE 20mm TYPE SI ASPHALT
C	BASE COURSE	60	SIZE 20mm TYPE SI ASPHALT
D	SUBBASE	150	CLASS 4 CRUSHED ROCK (E ≥ 150MPa); OR CLASS 4 RECYCLED CRUSHED CONCRETE (E ≥ 150MPa)
E	CAPPING LAYER (IF REQUIRED)	150	TYPE A CAPPING MATERIAL (CBR ≥ 6%, K ≤ 5E-09M/SEC)
	TOTAL DEPTH	**590**	SUBGRADE DCBR TO BE CONFIRMED

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
C	AD	04.07.25	FINAL CONCEPT DESIGN
B	AD	26.05.25	FINAL CONCEPT DESIGN
A	AD	30.04.25	FINAL CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE
APPROVED A DONATO
CAT:
PROJ:
FILE: 30043502T--8001.dgn

Victorian Planning Authority

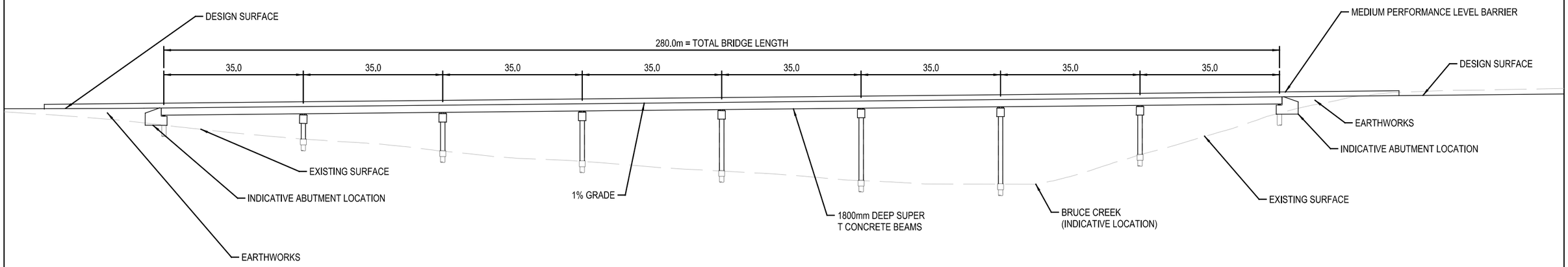
SCALE OF METRES
HOR
VER

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
TYPICALS DETAILS
PAVEMENT PROFILES

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	22	-8001	C

4/07/2025 12:21:45 PM Default 30043502T--8001.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--8001.dgn



BRIDGE 01 - EAST-WEST LINK ROAD BRUCE CREEK BRIDGE

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
B	AD	04.07.25	FINAL CONCEPT DESIGN
A	AD	26.05.25	FINAL CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE

APPROVED A DONATO

CAT:

PROJ:

FILE: 30043502T--9001.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 10 20
VER

BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
STRUCTUAL TYPICAL DETAILS
BRIDGE ELEVATION

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	23	-9001	B

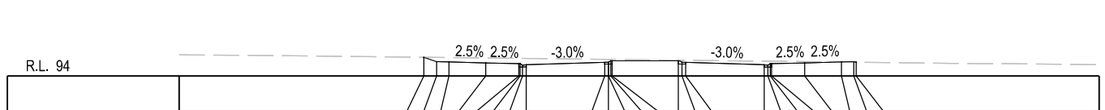
4/07/2025 12:21:46 PM Default 30043502T--9001.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--9001.dgn

Appendix B Detailed Cross Sections

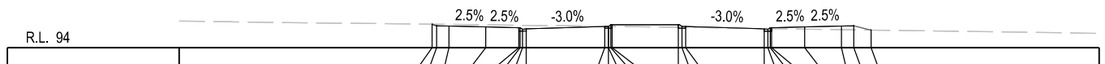
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	95.000	94.130	94.105	94.030	93.963	93.963	93.838	93.878	94.070	94.078	94.078	94.203	94.203	94.203	94.078	94.070	93.878	93.838	93.963	93.963	94.030	94.105	94.130	94.685
EXISTING LEVELS	95.000	95.000	95.000	95.000	94.981	94.980	94.978	94.975	94.912	94.909	94.909	94.907	94.905	94.851	94.847	94.843	94.760	94.757	94.754	94.753	94.718	94.690	94.692	94.685
DESIGN OFFSETS	-16.609	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.665

100.000



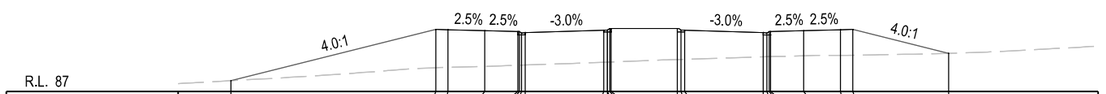
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	95.519	95.167	95.142	95.067	95.000	95.000	94.875	94.915	95.107	95.115	95.115	95.240	95.240	95.240	95.115	95.107	94.915	94.875	95.000	95.000	95.067	95.142	95.167	95.120
EXISTING LEVELS	95.519	95.507	95.496	95.462	95.432	95.431	95.428	95.425	95.355	95.351	95.351	95.349	95.348	95.289	95.285	95.282	95.211	95.208	95.205	95.204	95.172	95.135	95.123	95.120
DESIGN OFFSETS	-15.054	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.188

50.000



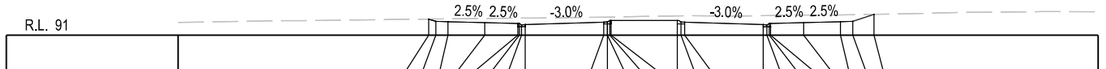
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	95.913	95.789	95.764	95.689	95.622	95.622	95.497	95.537	95.729	95.737	95.737	95.862	95.862	95.862	95.737	95.729	95.537	95.497	95.622	95.622	95.689	95.764	95.789	95.438
EXISTING LEVELS	95.913	95.909	95.898	95.865	95.830	95.828	95.825	95.822	95.741	95.737	95.737	95.735	95.733	95.658	95.654	95.649	95.562	95.558	95.556	95.554	95.518	95.473	95.457	95.438
DESIGN OFFSETS	-14.371	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.406

0.000



DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	87.882	92.054	92.029	91.954	91.887	91.887	91.762	91.802	91.994	92.002	92.002	92.127	92.127	92.127	92.002	91.994	91.802	91.762	91.887	91.887	91.954	92.029	92.054	90.103
EXISTING LEVELS	87.882	88.931	88.972	89.044	89.141	89.144	89.150	89.160	89.372	89.384	89.384	89.392	89.396	89.603	89.612	89.621	89.823	89.834	89.841	89.844	89.915	89.945	89.955	90.103
DESIGN OFFSETS	-30.691	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	27.804

250.000

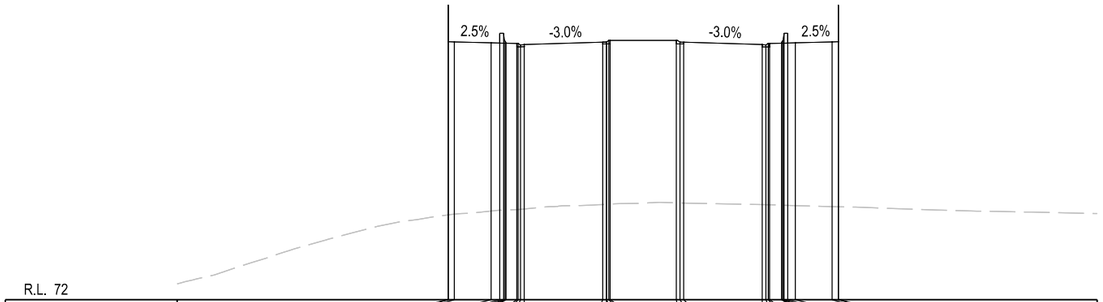


DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	92.316	92.126	92.101	92.026	91.958	91.958	91.833	91.873	92.065	92.074	92.074	92.199	92.199	92.199	92.074	92.065	91.873	91.833	91.958	91.958	92.026	92.101	92.126	92.701
EXISTING LEVELS	92.316	92.322	92.335	92.365	92.393	92.394	92.395	92.396	92.470	92.474	92.477	92.478	92.569	92.576	92.583		92.591	92.597	92.601	92.603	92.635	92.649	92.668	92.701
DESIGN OFFSETS	-14.570	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.725

200.000

DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	94.144	92.997	92.972	92.897	92.830	92.830	92.705	92.745	92.937	92.946	92.946	93.071	93.071	93.071	92.946	92.937	92.745	92.705	92.830	92.830	92.897	92.972	92.997	94.032
EXISTING LEVELS	94.144	94.133	94.132	94.130	94.127	94.127	94.127	94.127	94.110	94.110	94.110	94.109	94.109	94.095	94.094	94.093	94.056	94.053	94.052	94.052	94.041	94.035	94.034	94.032
DESIGN OFFSETS	-17.441	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	23.104

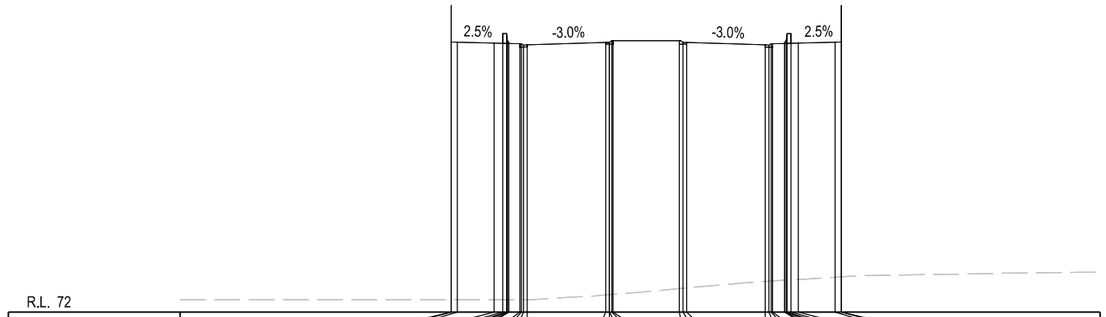
150.000



R.L. 72

DESIGN FEATURES	FENCE TOP_L	FP_L1-L	SUP_L2-L	SUP_L1-L	BB-L	BT-L	BH2-L	BH1-L	BARR_L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	BARR_R	BH1-L1	BH2-L1	BT-L1	BB-L1	SUP_R1-R	SUP_R2-R	FP_R	FENCE TOP
DESIGN LEVELS	96.010	93.010	92.998	92.923	93.693	93.693	93.153	92.973	92.893	92.870	92.870	92.745	92.785	92.977	92.986	92.986	93.111	93.111	93.111	92.986	92.977	92.785	92.745	92.870	92.870	92.895	92.975	93.155	93.695	92.923	92.998	93.010	96.010	
EXISTING LEVELS	78.904	78.904	78.958	79.210	79.275	79.285	79.287	79.292	79.292	79.327	79.331	79.342	79.373	79.745	79.755	79.755	79.768	79.776	79.878	79.870	79.862	79.733	79.727	79.723	79.721	79.695	79.690	79.688	79.679	79.663	79.581	79.568	79.568	
DESIGN OFFSETS	-12.901	-12.900	-12.400	-9.400	-8.700	-8.385	-8.325	-8.200	-8.200	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	14.287	14.413	14.472	14.787	15.400	18.400	18.900	18.901	

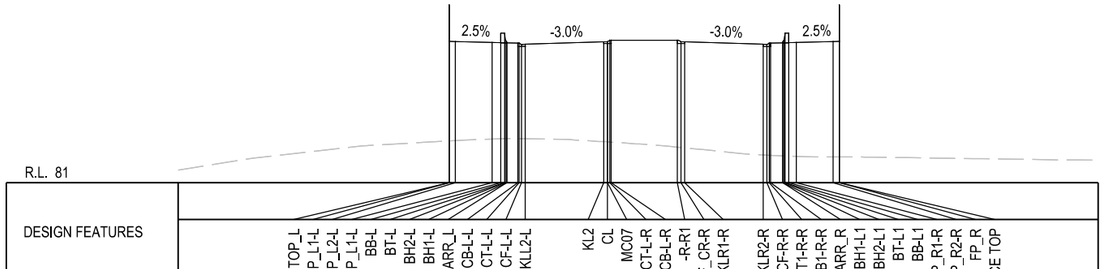
350.000



R.L. 72

DESIGN FEATURES	FENCE TOP_L	FP_L1-L	SUP_L2-L	SUP_L1-L	BB-L	BT-L	BH2-L	BH1-L	BARR_L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	BARR_R	BH1-L1	BH2-L1	BT-L1	BB-L1	SUP_R1-R	SUP_R2-R	FP_R	FENCE TOP
DESIGN LEVELS	97.010	94.010	93.998	93.923	94.693	94.693	94.153	93.973	93.893	93.870	93.870	93.745	93.785	93.977	93.986	93.986	94.111	94.111	94.111	93.986	93.977	93.785	93.745	93.870	93.870	93.870	93.895	93.975	94.155	94.695	94.695	93.923	93.998	94.010	97.010	
EXISTING LEVELS	73.000	73.000	73.000	73.000	73.000	73.000	73.000	73.000	73.000	73.000	73.000	73.000	73.000	73.405	73.427	73.427	73.439	73.447	73.918	73.942	73.972	74.503	74.524	74.537	74.544	74.602	74.602	74.608	74.610	74.625	74.656	74.838	74.874	74.874		
DESIGN OFFSETS	-12.901	-12.900	-12.400	-9.400	-8.700	-8.385	-8.325	-8.200	-8.200	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	14.287	14.288	14.413	14.472	14.787	15.400	18.400	18.900	18.901		

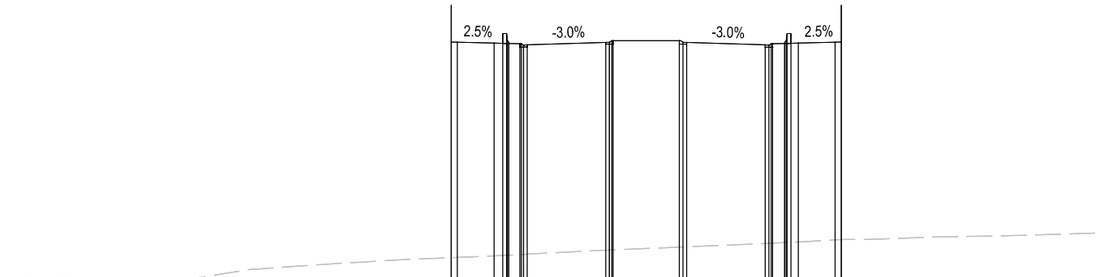
450.000



R.L. 81

DESIGN FEATURES	FENCE TOP_L	FP_L1-L	SUP_L2-L	SUP_L1-L	BB-L	BT-L	BH2-L	BH1-L	BARR_L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	BARR_R	BH1-L1	BH2-L1	BT-L1	BB-L1	SUP_R1-R	SUP_R2-R	FP_R	FENCE TOP
DESIGN LEVELS	95.510	92.510	92.498	92.423	93.193	93.193	92.653	92.473	92.393	92.370	92.370	92.245	92.285	92.477	92.486	92.486	92.611	92.611	92.611	92.486	92.477	92.285	92.245	92.370	92.370	92.395	92.475	92.655	93.195	93.195	92.423	92.498	92.510	95.510		
EXISTING LEVELS	84.403	84.403	84.428	84.556	84.581	84.590	84.592	84.595	84.595	84.588	84.586	84.583	84.578	84.347	84.327	84.327	84.312	84.303	83.892	83.860	83.828	83.264	83.249	83.240	83.235	83.180	83.180	83.175	83.173	83.162	83.140	83.095	83.092	83.092		
DESIGN OFFSETS	-12.901	-12.900	-12.400	-9.400	-8.700	-8.385	-8.325	-8.200	-8.200	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	14.288	14.288	14.413	14.472	14.787	15.400	18.400	18.900	18.901		

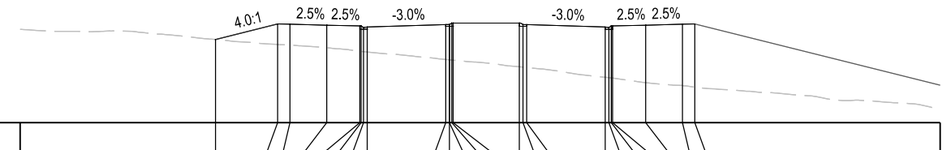
300.000



R.L. 73

DESIGN FEATURES	FENCE TOP_L	FP_L1-L	SUP_L2-L	SUP_L1-L	BB-L	BT-L	BH2-L	BH1-L	BARR_L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	BARR_R	BH1-L1	BH2-L1	BT-L1	BB-L1	SUP_R1-R	SUP_R2-R	FP_R	FENCE TOP
DESIGN LEVELS	96.510	93.510	93.498	93.423	94.193	94.193	93.653	93.473	93.393	93.370	93.370	93.245	93.285	93.477	93.486	93.486	93.611	93.611	93.611	93.486	93.477	93.285	93.245	93.370	93.370	93.395	93.475	93.655	94.195	94.195	93.423	93.498	93.510	96.510		
EXISTING LEVELS	75.944	75.944	75.963	76.084	76.118	76.133	76.136	76.142	76.142	76.189	76.195	76.206	76.224	76.546	76.559	76.559	76.567	76.572	76.793	76.806	76.820	77.096	77.109	77.117	77.121	77.163	77.163	77.169	77.172	77.186	77.216	77.382	77.406	77.406		
DESIGN OFFSETS	-12.901	-12.900	-12.400	-9.400	-8.700	-8.385	-8.325	-8.200	-8.200	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	14.287	14.288	14.413	14.472	14.787	15.400	18.400	18.900	18.901		

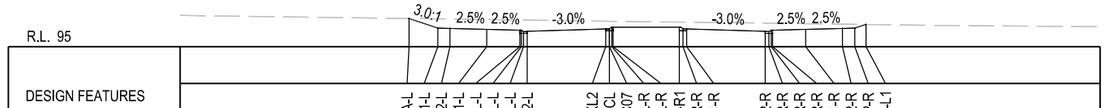
400.000



R.L. 87

DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R
DESIGN LEVELS	93.768	95.038	95.013	94.938	94.870	94.870	94.745	94.785	94.977	94.986	94.986	95.111	95.111	95.111	94.986	94.977	94.785	94.745	94.870	94.870	94.938	95.013	95.038
EXISTING LEVELS	93.768	93.363	93.317	93.099	92.802	92.792	92.773	92.743	92.144	92.115	92.115	92.097	92.086	91.544	91.516	91.487	90.696	90.668	90.642	90.627	90.260	90.017	89.880
DESIGN OFFSETS	-19.078	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000

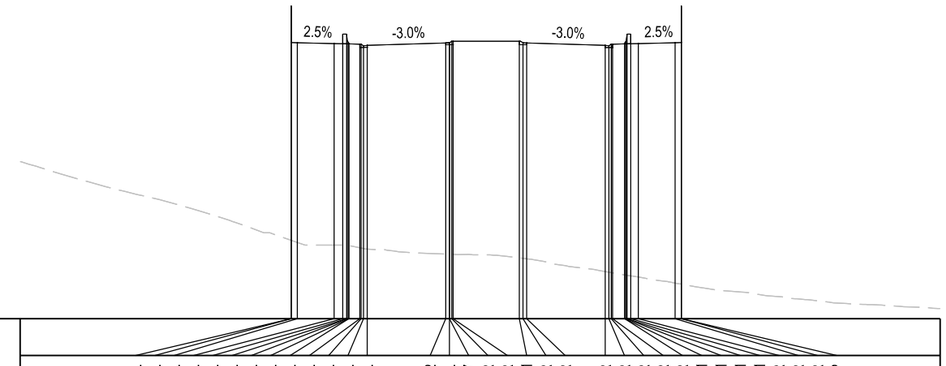
550.000



R.L. 95

DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	97.280	96.498	96.473	96.398	96.330	96.330	96.205	96.245	96.437	96.446	96.446	96.571	96.571	96.571	96.446	96.437	96.245	96.205	96.330	96.330	96.398	96.473	96.498	96.801
EXISTING LEVELS	97.280	97.248	97.235	97.194	97.158	97.156	97.154	97.150	97.063	97.059	97.059	97.057	97.055	96.991	96.987	96.983	96.901	96.897	96.894	96.893	96.861	96.821	96.812	96.801
DESIGN OFFSETS	-16.346	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.910

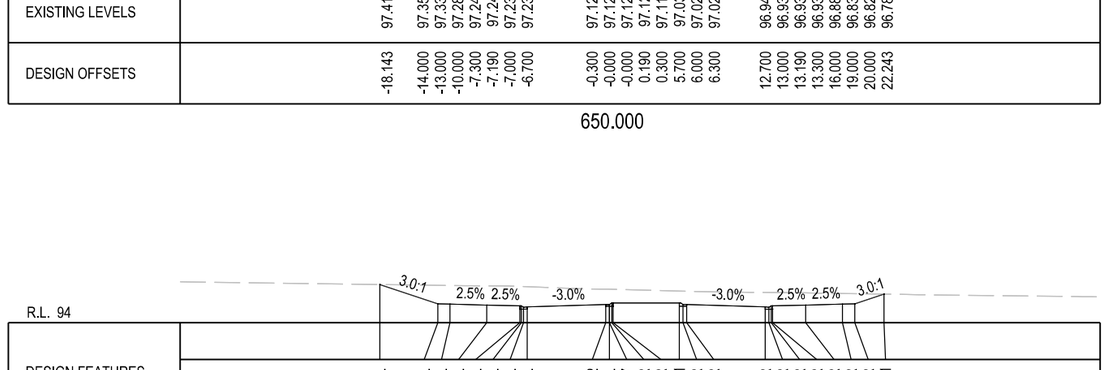
700.000



R.L. 72

DESIGN FEATURES	FENCE TOP_L	FP_L1-L	SUP_L2-L	SUP_L1-L	BB-L	BT-L	BH2-L	BH1-L	BARR_L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	BARR_R	BH1-L1	BH2-L1	BT-L1	BB-L1	SUP_R1-R	SUP_R2-R	FP_R	FENCE TOP
DESIGN LEVELS	97.510	94.510	94.498	94.423	95.193	95.193	94.653	94.473	94.393	94.370	94.370	94.245	94.285	94.477	94.486	94.486	94.611	94.611	94.611	94.486	94.477	94.285	94.245	94.370	94.370	94.395	94.475	94.655	95.195	95.195	94.423	94.498	94.510	97.510	
EXISTING LEVELS		78.394	78.222	78.000	78.000	78.000	77.992	77.965	77.965	77.775	77.752	77.712	77.669	77.266	77.255	77.255	77.248	77.244	76.967	76.925	76.884	75.841	75.787	75.752	75.732	75.563	75.563	75.546	75.537	75.488	75.401	74.906	74.818	74.818	
DESIGN OFFSETS	-12.901	-12.900	-12.400	-9.400	-8.700	-8.385	-8.325	-8.200	-8.200	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	14.287	14.288	14.413	14.472	14.787	15.400	18.400	18.900	18.901	

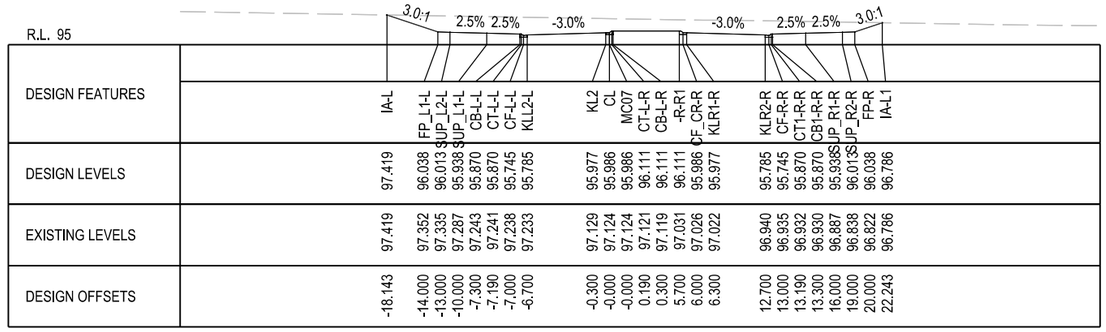
500.000



R.L. 94

DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	97.110	95.538	95.513	95.438	95.370	95.370	95.245	95.285	95.477	95.486	95.486	95.611	95.611	95.611	95.486	95.477	95.285	95.245	95.370	95.370	95.438	95.513	95.538	96.333
EXISTING LEVELS	97.110	97.046	97.032	97.000	96.959	96.955	96.948	96.936	96.735	96.729	96.729	96.724	96.721	96.570	96.562	96.553	96.463	96.460	96.458	96.457	96.431	96.379	96.365	96.333
DESIGN OFFSETS	-18.717	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.385

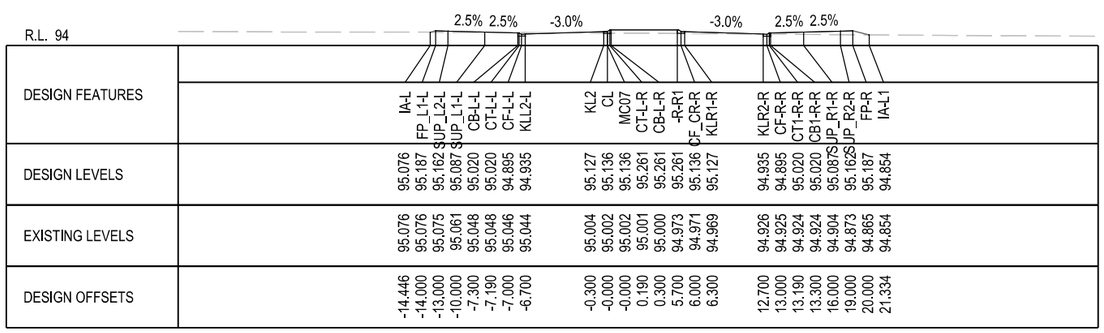
600.000

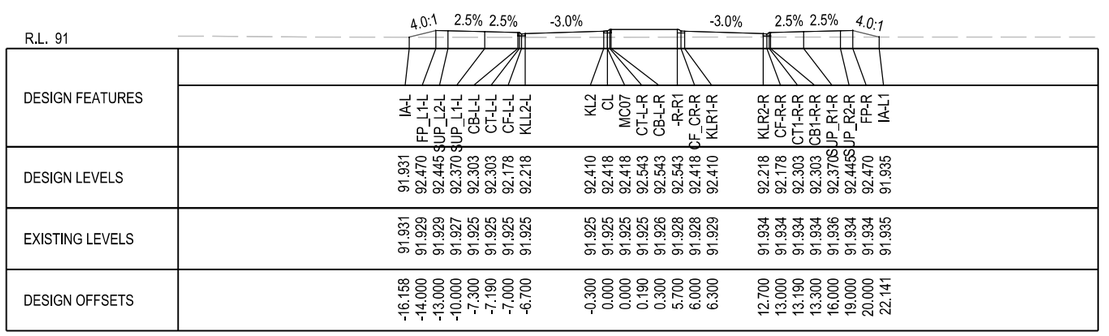


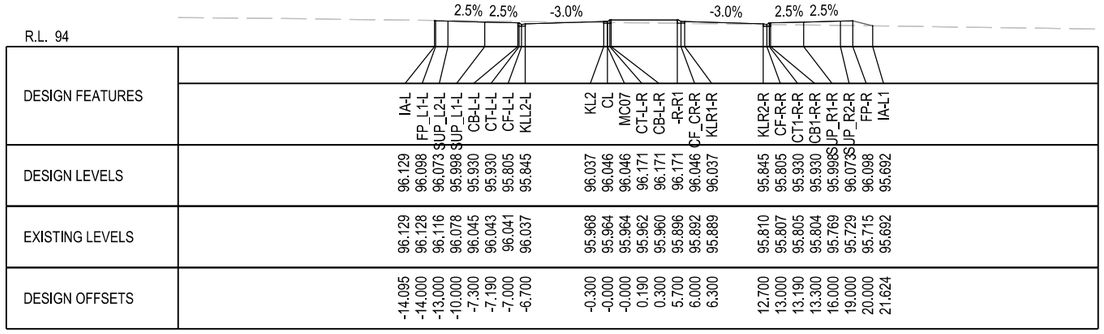
R.L. 95

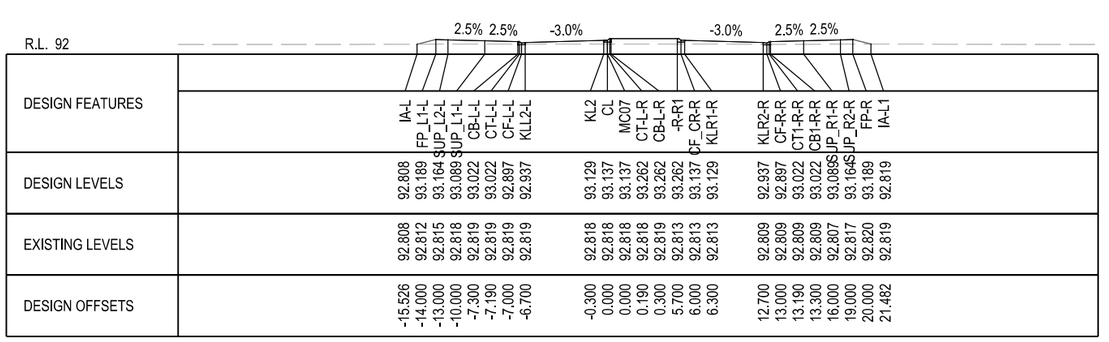
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	97.419	96.038	96.013	95.938	95.870	95.870	95.745	95.785	95.977	95.986	95.986	96.111	96.111	96.111	95.986	95.977	95.785	95.745	95.870	95.870	95.938	96.013	96.038	96.786
EXISTING LEVELS	97.419	97.352	97.335	97.287	97.243	97.241	97.238	97.233	97.129	97.124	97.124	97.121	97.119	97.031	97.026	97.022	96.940	96.935	96.932	96.930	96.887	96.838	96.822	96.786
DESIGN OFFSETS	-18.143	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.243

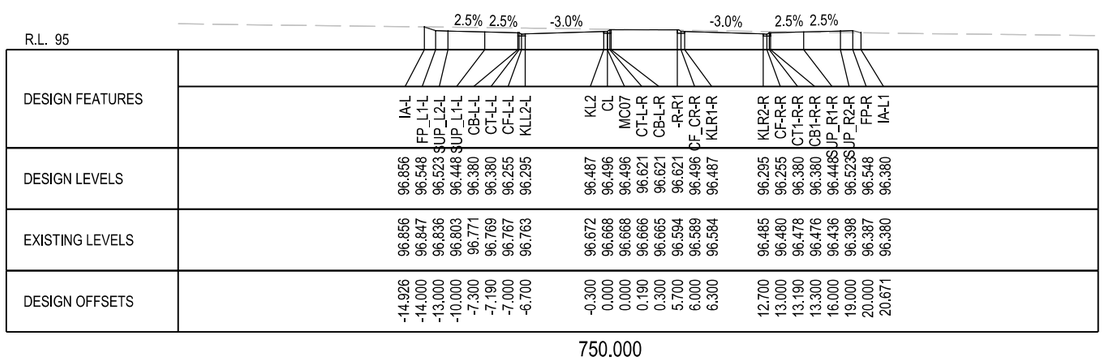
650.000

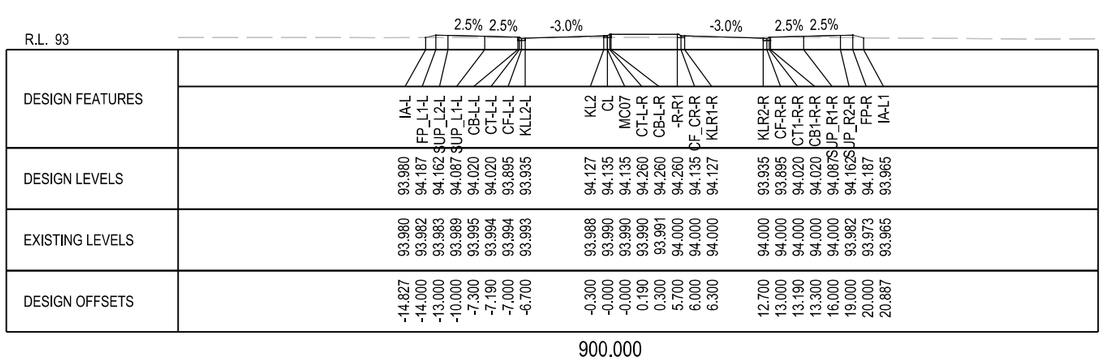

R.L. 94
2.5% 2.5% -3.0% -3.0% 2.5% 2.5%
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
95.076 95.187 95.162 95.087 95.020 95.020 95.048 94.895 94.935 95.127 95.136 95.136 95.261 95.261 95.261 95.136 95.127 94.935 94.895 95.020 95.020 95.087 95.162 95.187 94.854
EXISTING LEVELS
95.076 95.076 95.075 95.061 95.048 95.048 95.046 95.044 95.004 95.002 95.002 95.001 95.000 94.973 94.971 94.969 94.926 94.925 94.924 94.924 94.904 94.873 94.865 94.854
DESIGN OFFSETS
-14.446 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 -0.000 -0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 21.334
850.000

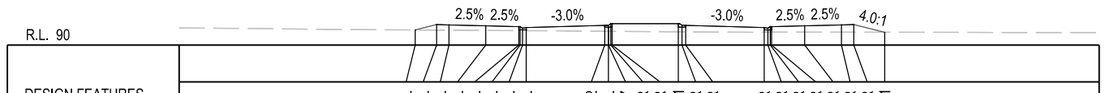

R.L. 91
4.0:1 2.5% 2.5% -3.0% -3.0% 2.5% 2.5% 4.0:1
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
91.931 92.470 92.445 92.370 92.303 92.303 92.178 92.218 92.410 92.418 92.418 92.543 92.543 92.543 92.418 92.410 92.218 92.178 92.303 92.303 92.087 92.162 92.470 91.935
EXISTING LEVELS
91.931 91.929 91.929 91.927 91.925 91.925 91.925 91.925 91.925 91.925 91.925 91.926 91.928 91.929
DESIGN OFFSETS
-16.158 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 0.000 0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 22.141
1000.000


R.L. 94
2.5% 2.5% -3.0% -3.0% 2.5% 2.5%
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
96.129 96.098 96.073 95.998 95.930 95.930 95.805 95.845 96.037 96.046 96.046 96.171 96.171 96.171 96.046 96.037 95.845 95.805 95.930 95.930 95.998 96.073 96.098 95.692
EXISTING LEVELS
96.129 96.128 96.116 96.078 96.045 96.043 96.041 96.037 95.968 95.964 95.964 95.962 95.960 95.896 95.892 95.889 95.810 95.807 95.805 95.804 95.769 95.729 95.715 95.692
DESIGN OFFSETS
-14.095 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 -0.000 -0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 21.624
800.000


R.L. 92
2.5% 2.5% -3.0% -3.0% 2.5% 2.5%
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
92.808 93.189 93.164 93.089 93.022 93.022 92.897 92.937 93.129 93.137 93.137 93.262 93.262 93.262 93.137 93.129 92.937 92.897 93.022 93.022 93.089 93.164 93.189 92.819
EXISTING LEVELS
92.808 92.812 92.815 92.818 92.819 92.819 92.819 92.819 92.818 92.818 92.818 92.819 92.813 92.813 92.813 92.813 92.809 92.809 92.809 92.809 92.807 92.817 92.820 92.819
DESIGN OFFSETS
-15.526 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 0.000 0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 21.482
950.000

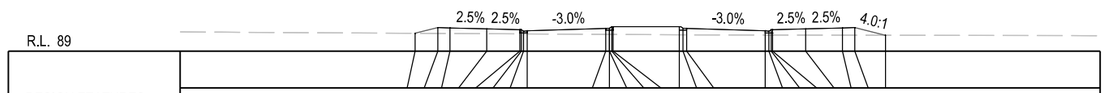

R.L. 95
2.5% 2.5% -3.0% -3.0% 2.5% 2.5%
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
96.856 96.548 96.523 96.448 96.380 96.380 96.255 96.295 96.487 96.496 96.496 96.621 96.621 96.621 96.496 96.487 96.295 96.255 96.380 96.380 96.448 96.523 96.548 96.380
EXISTING LEVELS
96.856 96.847 96.836 96.803 96.771 96.769 96.767 96.763 96.672 96.668 96.668 96.666 96.665 96.594 96.589 96.584 96.485 96.480 96.478 96.476 96.436 96.398 96.387 96.380
DESIGN OFFSETS
-14.926 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 0.000 0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 20.671
750.000


R.L. 93
2.5% 2.5% -3.0% -3.0% 2.5% 2.5%
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
93.980 94.187 94.162 94.087 94.020 94.020 93.895 93.935 94.127 94.135 94.135 94.260 94.260 94.260 94.135 94.127 93.935 93.895 94.020 94.020 94.087 94.162 94.187 93.965
EXISTING LEVELS
93.980 93.982 93.983 93.989 93.995 93.994 93.994 93.993 93.988 93.990 93.990 93.990 93.991 94.000 94.000 94.000 94.000 94.000 94.000 94.000 94.000 93.982 93.973 93.965
DESIGN OFFSETS
-14.827 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 -0.000 -0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 20.887
900.000



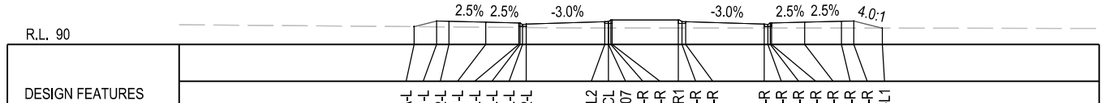
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	91.225	91.662	91.637	91.562	91.494	91.494	91.369	91.409	91.601	91.610	91.610	91.735	91.735	91.735	91.610	91.601	91.409	91.369	91.494	91.494	91.562	91.637	91.662	91.030
EXISTING LEVELS	91.225	91.203	91.195	91.180	91.165	91.165	91.164	91.162	91.116	91.113	91.113	91.112	91.111	91.067	91.065	91.062	91.038	91.038	91.039	91.039	91.036	91.033	91.033	91.030
DESIGN OFFSETS	-15.748	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.526

1150.000



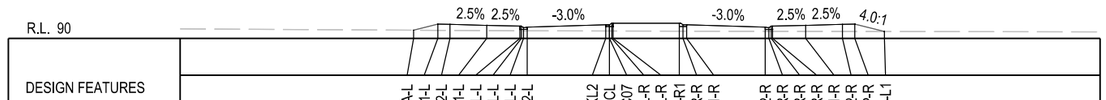
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	90.453	90.912	90.887	90.812	90.744	90.744	90.619	90.659	90.851	90.860	90.860	90.985	90.985	90.985	90.860	90.851	90.659	90.619	90.744	90.744	90.812	90.887	90.912	90.288
EXISTING LEVELS	90.453	90.442	90.436	90.418	90.402	90.401	90.400	90.399	90.361	90.359	90.359	90.358	90.357	90.325	90.323	90.322	90.306	90.305	90.305	90.305	90.300	90.294	90.292	90.288
DESIGN OFFSETS	-15.837	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.497

1300.000



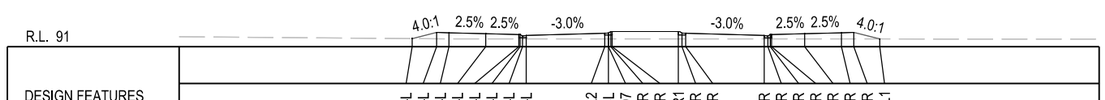
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	91.450	91.912	91.887	91.812	91.744	91.744	91.619	91.659	91.851	91.860	91.860	91.985	91.985	91.985	91.860	91.851	91.659	91.619	91.744	91.744	91.812	91.887	91.912	91.330
EXISTING LEVELS	91.450	91.435	91.427	91.403	91.381	91.380	91.379	91.376	91.339	91.339	91.339	91.338	91.338	91.334	91.334	91.334	91.337	91.337	91.337	91.336	91.333	91.333	91.330	
DESIGN OFFSETS	-15.845	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.325

1100.000



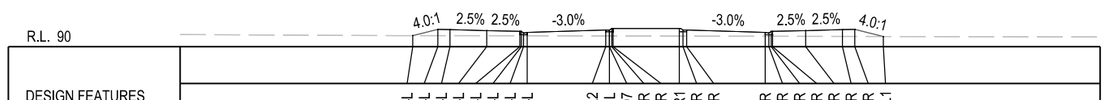
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	90.668	91.162	91.137	91.062	90.994	90.994	90.869	90.909	91.101	91.110	91.110	91.235	91.235	91.235	91.110	91.101	90.909	90.869	90.994	90.994	91.062	91.137	91.162	90.560
EXISTING LEVELS	90.668	90.656	90.650	90.633	90.617	90.616	90.615	90.614	90.602	90.602	90.602	90.601	90.601	90.591	90.591	90.590	90.576	90.575	90.575	90.575	90.571	90.566	90.564	90.560
DESIGN OFFSETS	-15.975	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.406

1250.000



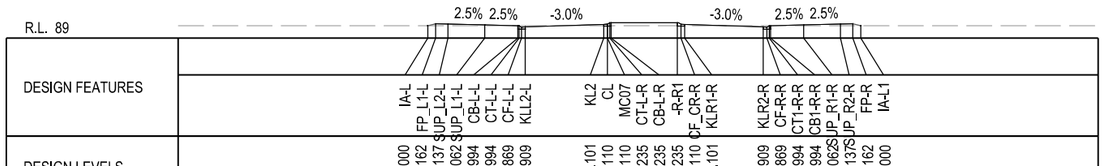
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	91.660	92.162	92.137	92.062	91.994	91.994	91.869	91.909	92.101	92.110	92.110	92.235	92.235	92.235	92.110	92.101	91.909	91.869	91.994	91.994	92.062	92.137	92.162	91.630
EXISTING LEVELS	91.660	91.644	91.638	91.636	91.634	91.634	91.634	91.634	91.630	91.629	91.629	91.629	91.629	91.630	91.631	91.631	91.635	91.636	91.636	91.636	91.636	91.633	91.633	91.630
DESIGN OFFSETS	-16.006	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.125

1050.000



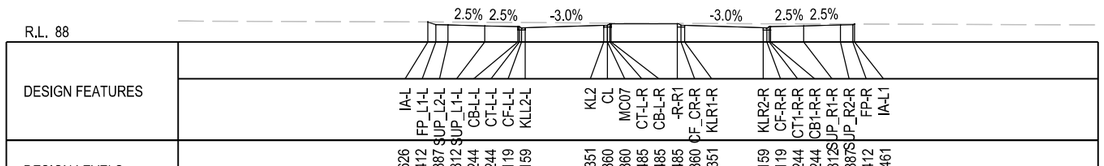
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	90.902	91.412	91.387	91.312	91.244	91.244	91.119	91.159	91.351	91.360	91.360	91.485	91.485	91.485	91.360	91.351	91.159	91.119	91.244	91.244	91.312	91.387	91.412	90.829
EXISTING LEVELS	90.902	90.896	90.895	90.889	90.884	90.884	90.884	90.883	90.871	90.871	90.871	90.870	90.870	90.860	90.860	90.859	90.847	90.847	90.846	90.846	90.841	90.836	90.834	90.829
DESIGN OFFSETS	-16.039	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.329

1200.000



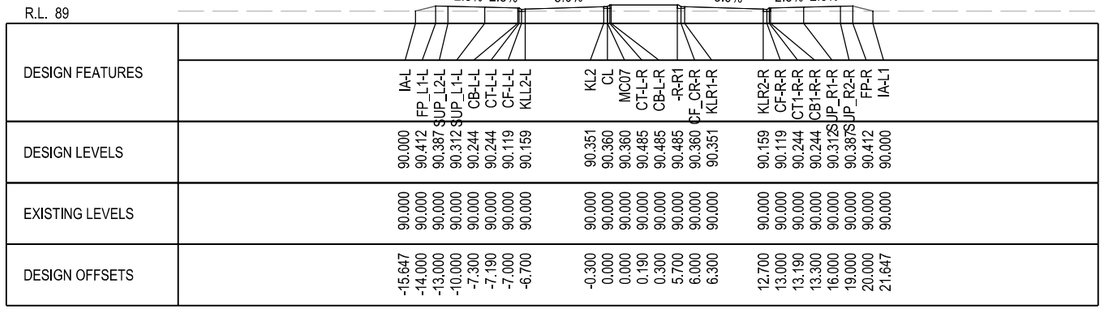
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	90.000	90.162	90.137	90.062	89.994	89.994	89.869	89.909	90.101	90.110	90.110	90.235	90.235	90.235	90.110	90.101	88.909	89.869	89.994	89.994	90.062	90.137	90.162	90.000
EXISTING LEVELS	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000
DESIGN OFFSETS	-14.647	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.647

1450.000



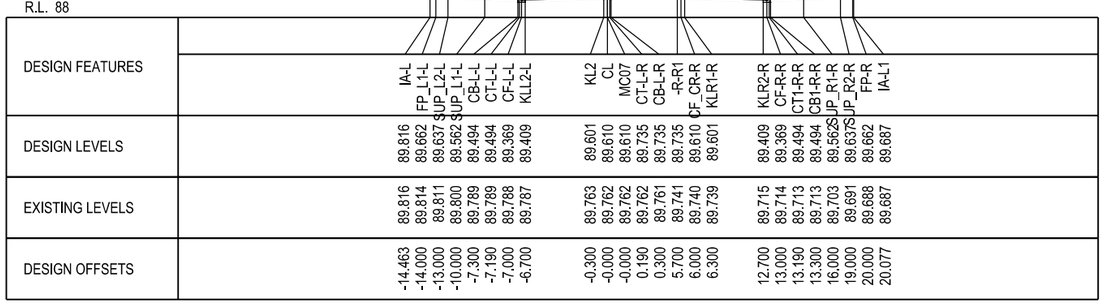
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	89.626	89.412	89.387	89.312	89.244	89.244	89.119	89.159	89.351	89.360	89.360	89.485	89.485	89.485	89.360	89.351	89.159	89.119	89.244	89.244	89.312	89.387	89.412	89.461
EXISTING LEVELS	89.626	89.623	89.619	89.606	89.590	89.589	89.588	89.586	89.547	89.545	89.545	89.544	89.544	89.515	89.514	89.513	89.489	89.488	89.487	89.486	89.476	89.465	89.461	89.461
DESIGN OFFSETS	-14.643	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.148

1600.000



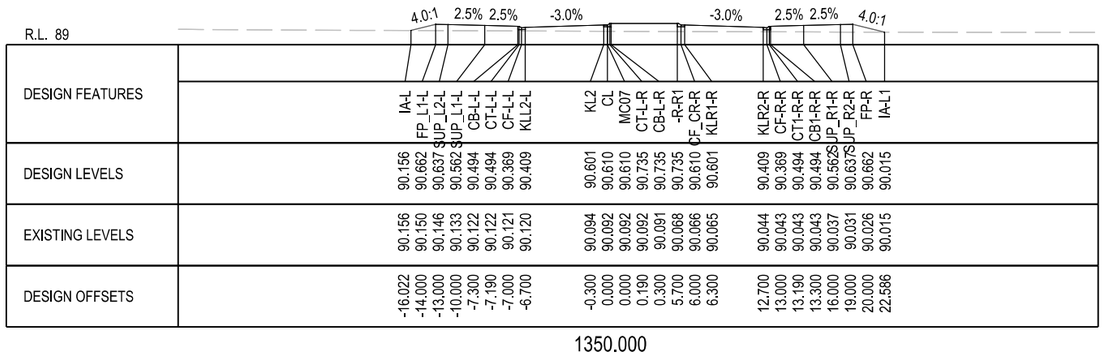
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	90.000	90.412	90.387	90.312	90.244	90.244	90.119	90.159	90.351	90.360	90.360	90.485	90.485	90.485	90.360	90.351	90.159	90.119	90.244	90.244	90.312	90.387	90.412	90.000
EXISTING LEVELS	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000
DESIGN OFFSETS	-14.647	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.647

1400.000



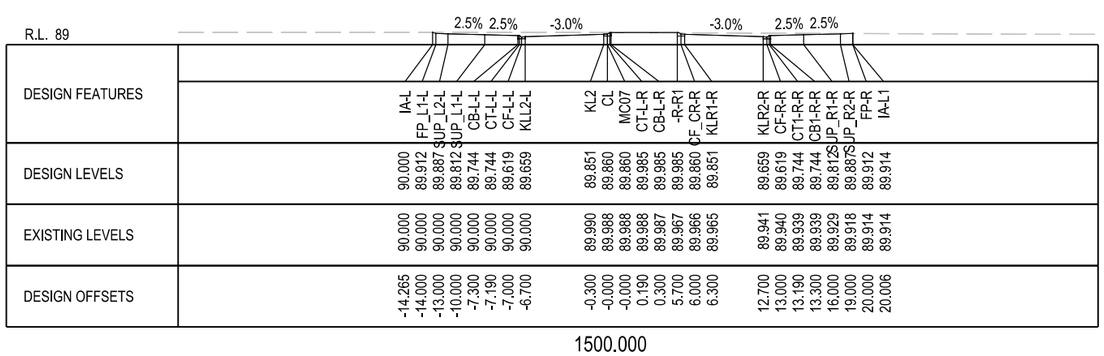
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	89.816	89.662	89.637	89.562	89.494	89.494	89.369	89.409	89.601	89.610	89.610	89.735	89.735	89.735	89.610	89.601	89.409	89.369	89.494	89.494	89.562	89.637	89.662	89.687
EXISTING LEVELS	89.816	89.814	89.811	89.800	89.789	89.789	89.788	89.787	89.763	89.762	89.762	89.762	89.761	89.741	89.740	89.739	89.715	89.714	89.713	89.713	89.703	89.691	89.688	89.687
DESIGN OFFSETS	-14.463	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.077

1550.000



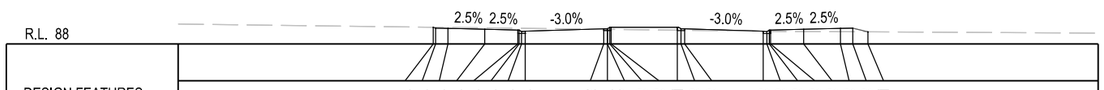
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	90.156	90.662	90.637	90.562	90.494	90.494	90.369	90.409	90.601	90.610	90.610	90.735	90.735	90.735	90.610	90.601	90.409	90.369	90.494	90.494	90.562	90.637	90.662	90.015
EXISTING LEVELS	90.156	90.150	90.146	90.133	90.122	90.122	90.121	90.120	90.094	90.092	90.092	90.092	90.091	90.068	90.066	90.065	90.044	90.043	90.043	90.043	90.037	90.031	90.026	90.015
DESIGN OFFSETS	-16.022	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.586

1350.000



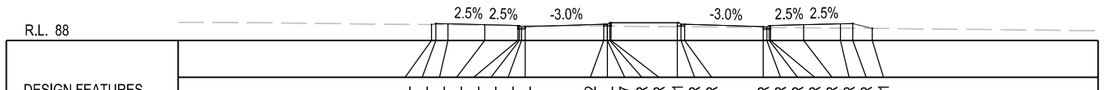
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	90.000	89.912	89.887	89.812	89.744	89.744	89.619	89.659	89.851	89.860	89.860	89.985	89.985	89.985	89.860	89.851	89.659	89.619	89.744	89.744	89.812	89.887	89.912	89.914
EXISTING LEVELS	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	89.990	89.988	89.988	89.988	89.987	89.967	89.966	89.965	89.941	89.940	89.939	89.939	89.929	89.918	89.914	89.914
DESIGN OFFSETS	-14.265	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.006

1500.000



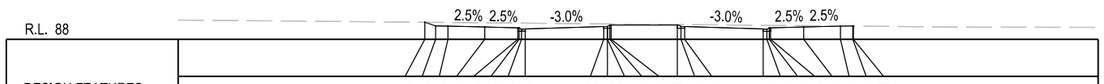
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	89.358	89.293	89.268	89.193	89.126	89.126	89.001	89.041	89.233	89.241	89.241	89.366	89.366	89.366	89.241	89.233	89.041	89.001	89.126	89.126	89.193	89.268	89.293	88.983
EXISTING LEVELS	89.358	89.356	89.343	89.307	89.274	89.272	89.270	89.266	89.189	89.185	89.185	89.183	89.181	89.116	89.112	89.109	89.031	89.027	89.025	89.024	89.000	88.996	88.991	88.983
DESIGN OFFSETS	-14.195	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.238

1750.000



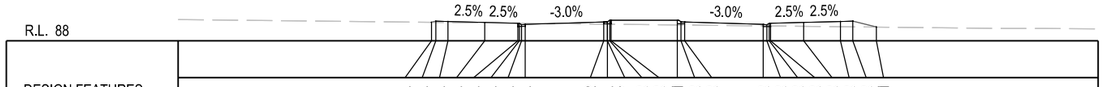
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	89.288	89.376	89.351	89.276	89.209	89.209	89.084	89.124	89.316	89.324	89.324	89.449	89.449	89.449	89.324	89.316	89.124	89.084	89.209	89.209	89.276	89.351	89.376	88.979
EXISTING LEVELS	89.288	89.285	89.277	89.253	89.230	89.230	89.228	89.225	89.166	89.163	89.163	89.160	89.159	89.114	89.111	89.109	89.055	89.053	89.051	89.050	89.028	89.002	88.997	88.979
DESIGN OFFSETS	-14.354	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.589

1900.000



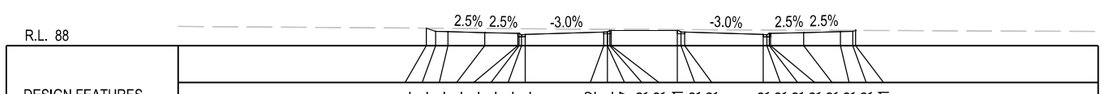
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	89.395	89.101	89.076	89.001	88.934	88.934	88.809	88.849	89.041	89.049	89.049	89.174	89.174	89.174	89.049	89.041	88.849	88.809	88.934	88.934	89.001	89.076	89.101	89.086
EXISTING LEVELS	89.395	89.387	89.378	89.352	89.328	89.327	89.325	89.323	89.266	89.264	89.264	89.262	89.261	89.213	89.211	89.208	89.151	89.149	89.147	89.146	89.122	89.096	89.087	89.086
DESIGN OFFSETS	-14.882	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.059

1700.000



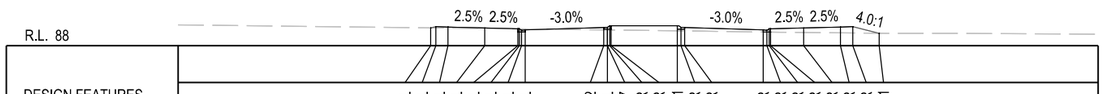
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	89.503	89.592	89.567	89.492	89.424	89.424	89.299	89.339	89.531	89.540	89.540	89.665	89.665	89.665	89.540	89.531	89.339	89.299	89.424	89.424	89.492	89.567	89.592	89.112
EXISTING LEVELS	89.503	89.499	89.489	89.457	89.428	89.427	89.425	89.422	89.353	89.350	89.350	89.348	89.347	89.289	89.285	89.282	89.213	89.209	89.207	89.206	89.177	89.144	89.133	89.112
DESIGN OFFSETS	-14.354	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.918

1850.000



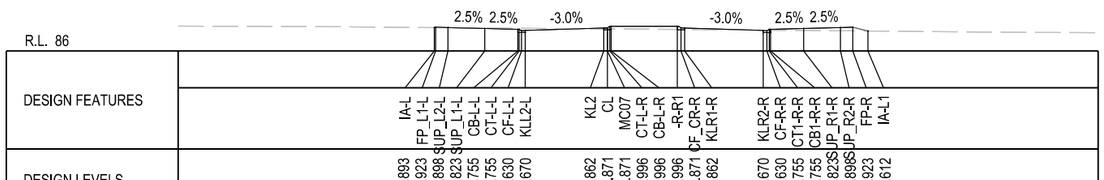
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	89.423	89.167	89.142	89.067	88.999	88.999	88.874	88.914	89.106	89.115	89.115	89.240	89.240	89.240	89.115	89.106	88.914	88.874	88.999	88.999	89.067	89.142	89.167	89.247
EXISTING LEVELS	89.423	89.417	89.410	89.389	89.370	89.369	89.368	89.367	89.341	89.340	89.340	89.339	89.339	89.314	89.312	89.311	89.281	89.280	89.279	89.279	89.266	89.252	89.248	89.247
DESIGN OFFSETS	-14.767	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.239

1650.000



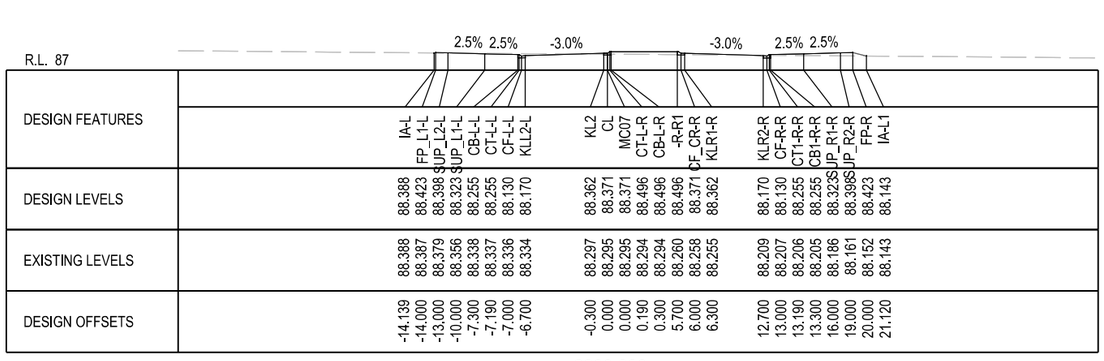
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	89.446	89.548	89.523	89.448	89.381	89.381	89.256	89.296	89.488	89.497	89.497	89.622	89.622	89.622	89.497	89.488	89.296	89.256	89.381	89.381	89.448	89.523	89.548	89.009
EXISTING LEVELS	89.446	89.441	89.429	89.394	89.362	89.361	89.359	89.355	89.280	89.276	89.276	89.274	89.273	89.206	89.202	89.198	89.117	89.113	89.111	89.109	89.078	89.044	89.033	89.009
DESIGN OFFSETS	-14.410	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.157

1800.000



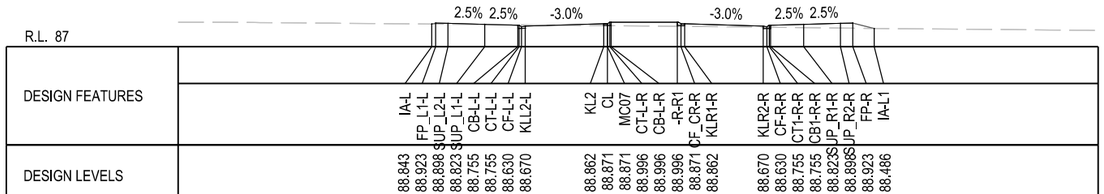
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	87.893	87.923	87.898	87.823	87.755	87.755	87.630	87.670	87.862	87.871	87.871	87.996	87.996	87.996	87.871	87.862	87.670	87.630	87.755	87.755	87.823	87.898	87.923	87.612
EXISTING LEVELS	87.893	87.892	87.884	87.859	87.838	87.838	87.836	87.834	87.789	87.787	87.787	87.786	87.786	87.742	87.739	87.735	87.675	87.674	87.673	87.672	87.658	87.630	87.623	87.612
DESIGN OFFSETS	-14.119	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.243

2050.000



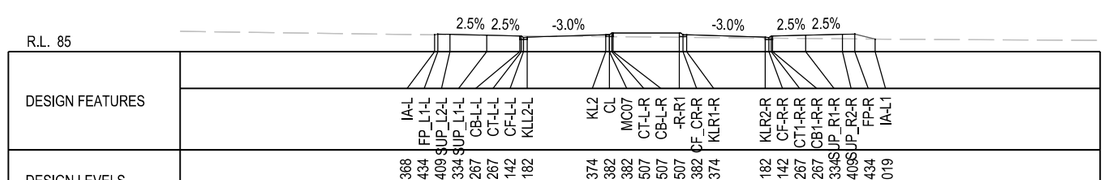
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	88.388	88.423	88.398	88.323	88.255	88.255	88.130	88.170	88.362	88.371	88.371	88.496	88.496	88.496	88.371	88.362	88.170	88.130	88.255	88.255	88.323	88.398	88.423	88.143
EXISTING LEVELS	88.388	88.387	88.379	88.356	88.338	88.337	88.336	88.334	88.297	88.295	88.295	88.294	88.294	88.260	88.258	88.255	88.209	88.207	88.206	88.205	88.186	88.161	88.152	88.143
DESIGN OFFSETS	-14.139	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.120

2000.000



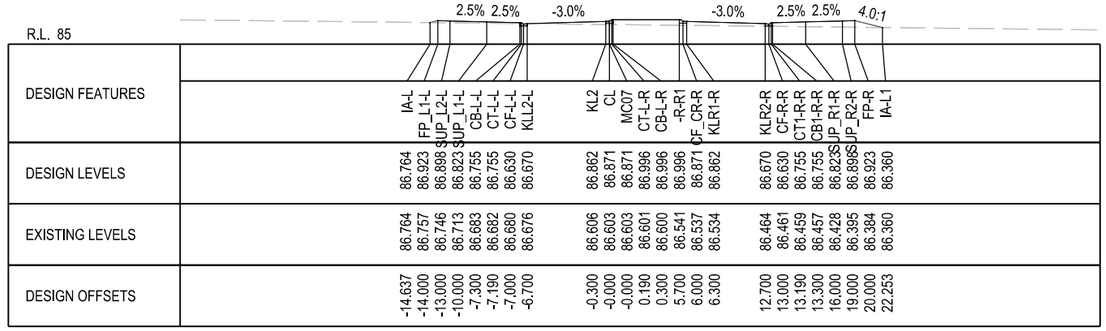
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	88.843	88.923	88.898	88.823	88.755	88.755	88.630	88.670	88.862	88.871	88.871	88.996	88.996	88.996	88.871	88.862	88.670	88.630	88.755	88.755	88.823	88.898	88.923	88.486
EXISTING LEVELS	88.843	88.840	88.830	88.803	88.778	88.777	88.775	88.772	88.712	88.709	88.709	88.707	88.706	88.659	88.656	88.654	88.591	88.587	88.585	88.584	88.553	88.518	88.506	88.486
DESIGN OFFSETS	-14.321	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.747

1950.000



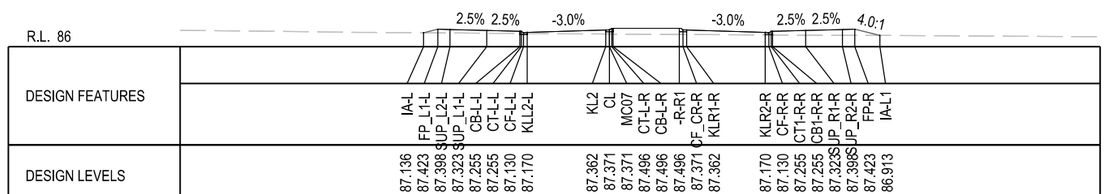
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	86.368	86.434	86.409	86.334	86.267	86.267	86.142	86.182	86.374	86.382	86.382	86.507	86.507	86.507	86.382	86.374	86.182	86.142	86.267	86.267	86.334	86.409	86.434	86.019
EXISTING LEVELS	86.368	86.365	86.353	86.320	86.289	86.288	86.286	86.284	86.230	86.228	86.228	86.226	86.225	86.173	86.170	86.167	86.110	86.107	86.105	86.104	86.077	86.046	86.036	86.019
DESIGN OFFSETS	-14.265	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.662

2200.000



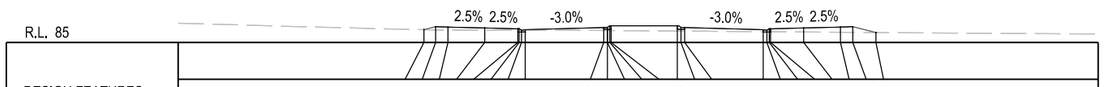
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	86.764	86.923	86.898	86.823	86.755	86.755	86.630	86.670	86.862	86.871	86.871	86.996	86.996	86.996	86.871	86.862	86.670	86.630	86.755	86.755	86.823	86.898	86.923	86.360
EXISTING LEVELS	86.764	86.757	86.746	86.713	86.683	86.682	86.680	86.676	86.606	86.603	86.603	86.601	86.600	86.541	86.537	86.534	86.464	86.461	86.459	86.457	86.428	86.395	86.384	86.360
DESIGN OFFSETS	-14.637	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.253

2150.000



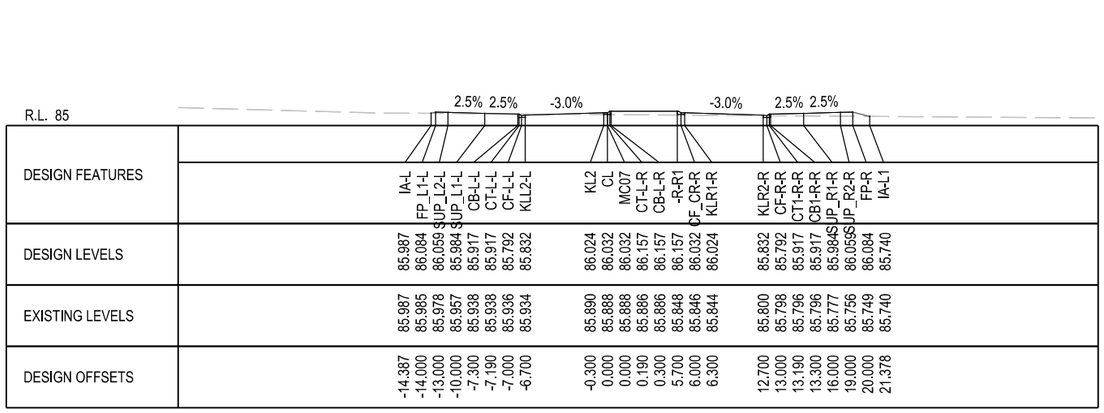
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	87.136	87.423	87.398	87.323	87.255	87.255	87.130	87.170	87.362	87.371	87.371	87.496	87.496	87.496	87.371	87.362	87.170	87.130	87.255	87.255	87.323	87.398	87.423	86.913
EXISTING LEVELS	87.136	87.128	87.121	87.102	87.085	87.084	87.082	87.080	87.030	87.028	87.028	87.026	87.026	86.990	86.989	86.987	86.955	86.953	86.952	86.952	86.938	86.926	86.921	86.913
DESIGN OFFSETS	-15.149	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	22.040

2100.000



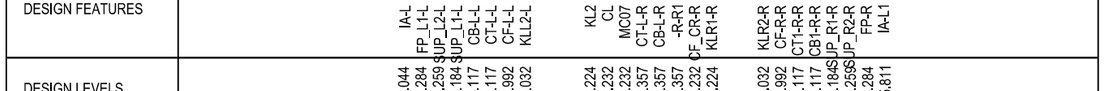
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SJP_R1-R	SJP_R2-R	FP-R	IA-L1
DESIGN LEVELS	86.044	86.284	86.259	86.184	86.117	86.117	85.992	86.032	86.224	86.232	86.232	86.357	86.357	86.357	86.232	86.224	86.032	85.992	86.117	86.117	86.184	86.259	86.284	85.811
EXISTING LEVELS	86.044	86.023	86.001	86.000	86.000	86.000	86.000	86.000	85.971	85.968	85.968	85.967	85.966	85.927	85.925	85.923	85.877	85.875	85.874	85.873	85.853	85.832	85.825	85.811
DESIGN OFFSETS	-14.962	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.892

2350.000



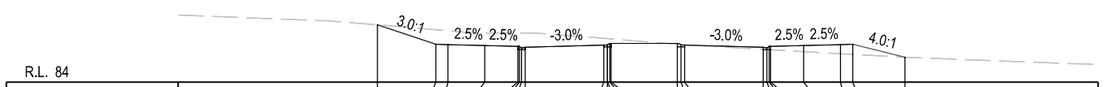
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SJP_R1-R	SJP_R2-R	FP-R	IA-L1
DESIGN LEVELS	85.987	86.084	86.059	85.984	85.917	85.917	85.792	85.832	86.024	86.032	86.032	86.157	86.157	86.157	86.032	86.024	85.832	85.792	85.917	85.917	85.984	86.059	86.084	85.740
EXISTING LEVELS	85.987	85.985	85.978	85.957	85.938	85.938	85.936	85.934	85.890	85.888	85.888	85.886	85.886	85.848	85.846	85.844	85.800	85.798	85.796	85.796	85.777	85.756	85.749	85.740
DESIGN OFFSETS	-14.387	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.378

2300.000



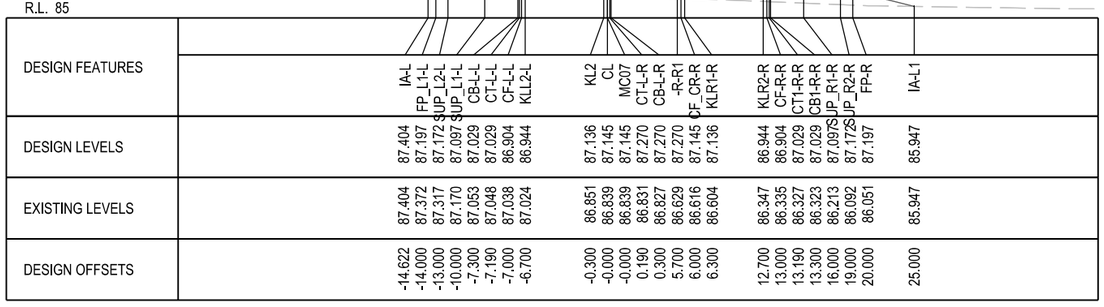
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SJP_R1-R	SJP_R2-R	FP-R	IA-L1
DESIGN LEVELS	86.195	86.134	86.109	86.034	85.967	85.967	85.842	85.882	86.074	86.082	86.082	86.207	86.207	86.207	86.082	86.074	85.882	85.842	85.967	85.967	86.034	86.109	86.134	85.862
EXISTING LEVELS	86.195	86.192	86.175	86.122	86.076	86.074	86.070	86.065	85.998	85.996	85.996	85.995	85.994	85.960	85.958	85.956	85.915	85.914	85.912	85.912	85.895	85.876	85.869	85.862
DESIGN OFFSETS	-14.183	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.087

2250.000



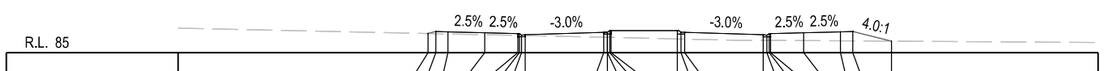
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SJP_R1-R	SJP_R2-R	FP-R	IA-L1
DESIGN LEVELS	88.660	87.076	87.051	86.976	86.908	86.908	86.783	86.823	87.015	87.024	87.024	87.149	87.149	87.149	87.024	87.015	86.823	86.783	86.908	86.908	86.976	87.051	87.076	86.013
EXISTING LEVELS	88.660	88.267	88.180	88.000	88.000	88.000	88.000	88.000	87.551	87.527	87.527	87.511	87.502	87.059	87.035	87.010	86.657	86.640	86.630	86.908	86.624	86.471	86.302	86.013
DESIGN OFFSETS	-18.754	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	24.251

2500.000



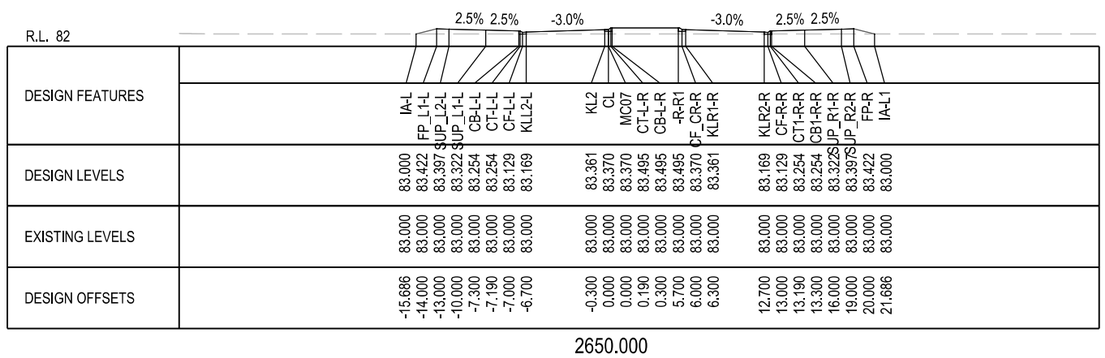
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SJP_R1-R	SJP_R2-R	FP-R	IA-L1
DESIGN LEVELS	87.404	87.197	87.172	87.097	87.029	87.029	86.904	86.944	87.136	87.145	87.145	87.270	87.270	87.270	87.145	87.136	86.944	86.904	87.029	87.029	87.097	87.172	87.197	85.947
EXISTING LEVELS	87.404	87.372	87.317	87.170	87.053	87.048	87.038	87.024	86.851	86.839	86.839	86.831	86.827	86.629	86.616	86.604	86.347	86.335	86.327	86.323	86.213	86.092	86.051	85.947
DESIGN OFFSETS	-14.622	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	25.000

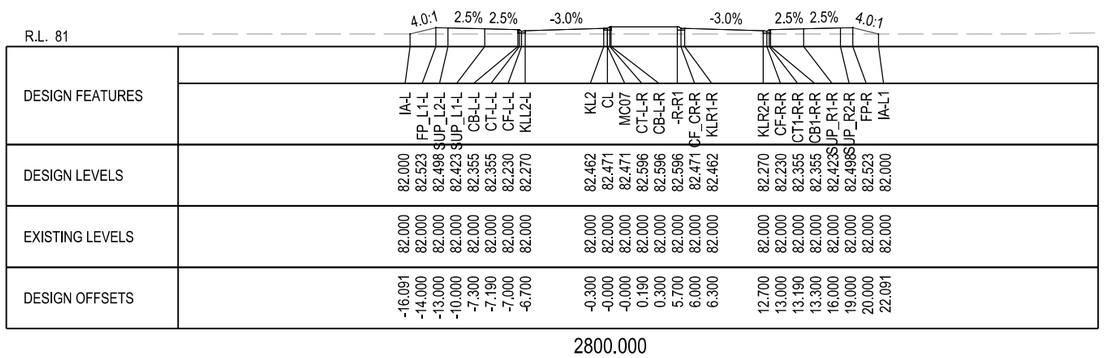
2450.000

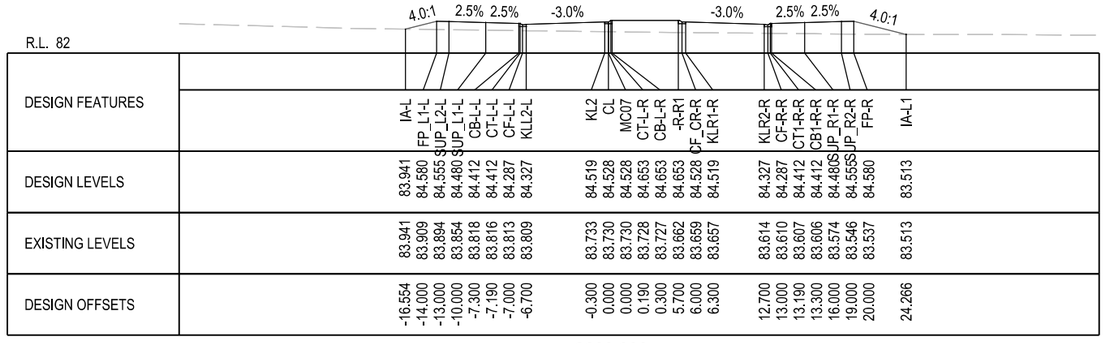


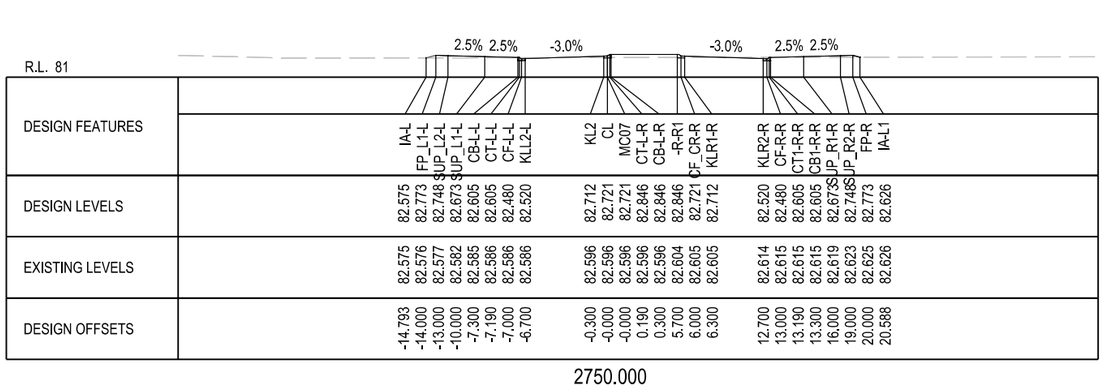
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SJP_R1-R	SJP_R2-R	FP-R	IA-L1
DESIGN LEVELS	86.564	86.723	86.698	86.623	86.555	86.555	86.430	86.470	86.662	86.671	86.671	86.796	86.796	86.796	86.671	86.662	86.470	86.430	86.555	86.555	86.623	86.698	86.723	85.934
EXISTING LEVELS	86.564	86.550	86.528	86.464	86.408	86.406	86.402	86.396	86.257	86.251	86.251	86.247	86.245	86.118	86.111	86.104	86.000	86.000	86.000	86.000	85.982	85.962	85.955	85.934
DESIGN OFFSETS	-14.636	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	23.156

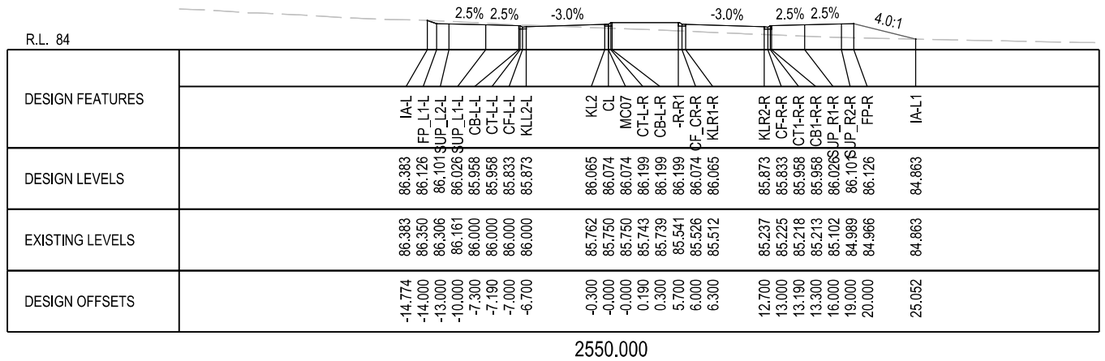
2400.000

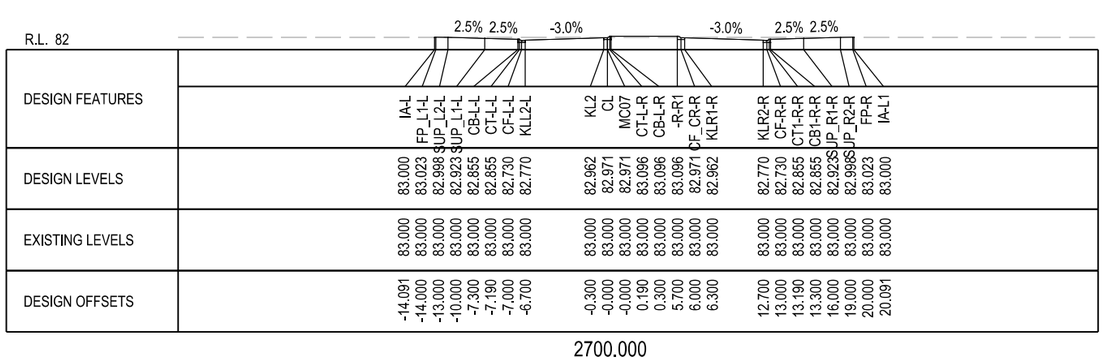

R.L. 82
2.5% 2.5% -3.0% -3.0% 2.5% 2.5%
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
83.000 83.422 83.397 83.322 83.254 83.254 83.129 83.169 83.361 83.370 83.370 83.495 83.495 83.495 83.370 83.361 83.169 83.129 83.254 83.254 83.322 83.397 83.422 83.000
EXISTING LEVELS
83.000 83.000
DESIGN OFFSETS
-15.686 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 0.000 0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 21.686
2650.000

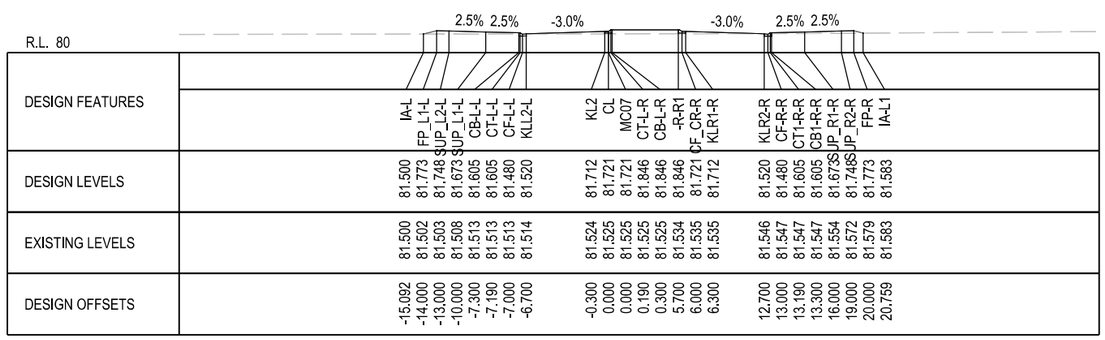

R.L. 81
4.0:1 2.5% 2.5% -3.0% -3.0% 2.5% 2.5% 4.0:1
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
82.000 82.523 82.498 82.423 82.355 82.355 82.230 82.270 82.462 82.471 82.596 82.596 82.596 82.596 82.471 82.462 82.270 82.230 82.355 82.355 82.423 82.498 82.523 82.000
EXISTING LEVELS
82.000 82.000
DESIGN OFFSETS
-16.091 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 -0.000 -0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 22.091
2800.000


R.L. 82
4.0:1 2.5% 2.5% -3.0% -3.0% 2.5% 2.5% 4.0:1
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
83.941 84.580 84.555 84.480 84.412 84.412 84.287 84.327 84.519 84.528 84.528 84.653 84.653 84.653 84.528 84.519 84.327 84.287 84.412 84.412 84.480 84.555 84.580 83.513
EXISTING LEVELS
83.941 83.909 83.894 83.854 83.818 83.816 83.813 83.809 83.733 83.730 83.730 83.728 83.727 83.662 83.659 83.657 83.614 83.610 83.607 83.606 83.574 83.546 83.537 83.513
DESIGN OFFSETS
-16.554 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 0.000 0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 24.266
2600.000


R.L. 81
2.5% 2.5% -3.0% -3.0% 2.5% 2.5%
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
82.575 82.773 82.748 82.673 82.605 82.605 82.480 82.520 82.712 82.721 82.721 82.846 82.846 82.846 82.721 82.712 82.520 82.480 82.605 82.605 82.678 82.748 82.773 82.626
EXISTING LEVELS
82.575 82.576 82.577 82.582 82.585 82.586 82.586 82.586 82.596 82.596 82.596 82.596 82.596 82.604 82.605 82.605 82.614 82.615 82.615 82.615 82.619 82.623 82.625 82.626
DESIGN OFFSETS
-14.793 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 -0.000 -0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 20.588
2750.000

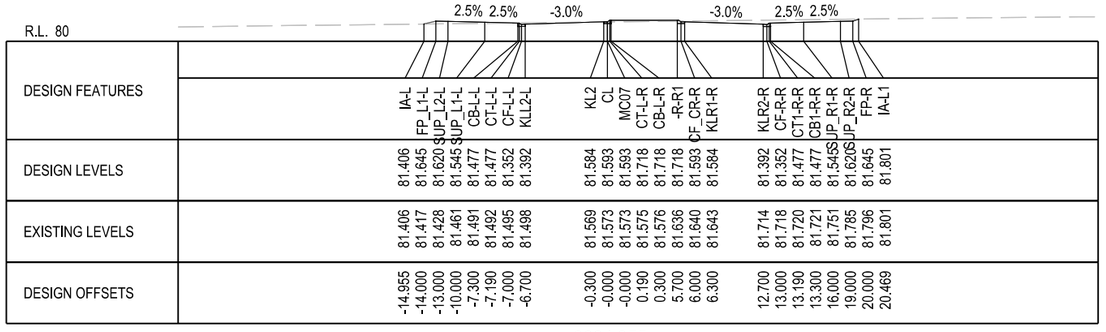

R.L. 84
2.5% 2.5% -3.0% -3.0% 2.5% 2.5% 4.0:1
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
86.383 86.126 86.101 86.026 85.958 85.958 85.833 85.873 86.065 86.074 86.074 86.199 86.199 86.199 86.074 86.065 85.873 85.833 85.958 85.958 86.026 86.105 86.126 84.863
EXISTING LEVELS
86.383 86.350 86.306 86.161 86.000 86.000 86.000 86.000 85.762 85.750 85.750 85.743 85.739 85.541 85.526 85.512 85.237 85.225 85.218 85.213 85.102 84.989 84.966 84.863
DESIGN OFFSETS
-14.774 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 -0.000 -0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 25.052
2550.000


R.L. 82
2.5% 2.5% -3.0% -3.0% 2.5% 2.5%
DESIGN FEATURES
IA-L FP_L1-L SUP_L2-L SUP_L1-L CB-L-L CT-L-L CF-L-L KLL2-L KL2 CL MC07 CT-L-R CB-L-R -R-R1 CF_CR-R KLR1-R KLR2-R CF-R-R CT1-R-R CB1-R-R SUP_R1-R SUP_R2-R FP-R IA-L1
DESIGN LEVELS
83.000 83.023 82.998 82.923 82.855 82.730 82.770 82.962 82.971 82.971 83.096 83.096 83.096 82.971 82.962 82.770 82.730 82.855 82.855 82.923 82.998 83.023 83.000
EXISTING LEVELS
83.000 83.000
DESIGN OFFSETS
-14.091 -14.000 -13.000 -10.000 -7.300 -7.190 -7.000 -6.700 -0.300 -0.000 -0.000 0.190 0.300 5.700 6.000 6.300 12.700 13.000 13.190 13.300 16.000 19.000 20.000 20.091
2700.000



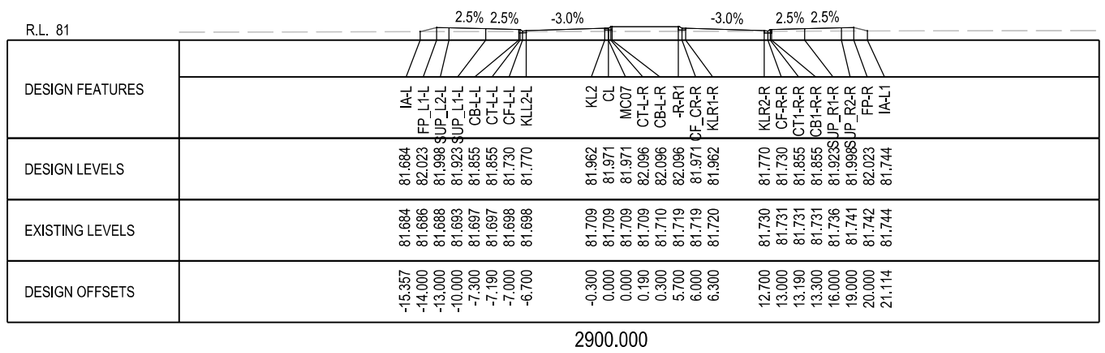
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	81.500	81.773	81.748	81.673	81.605	81.605	81.513	81.520	81.712	81.721	81.721	81.846	81.846	81.846	81.721	81.712	81.520	81.480	81.605	81.605	81.673	81.748	81.773	81.583
EXISTING LEVELS	81.500	81.502	81.503	81.508	81.513	81.513	81.513	81.514	81.524	81.525	81.525	81.525	81.525	81.534	81.535	81.535	81.546	81.547	81.547	81.547	81.554	81.572	81.579	81.583
DESIGN OFFSETS	-15.092	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.759

2950.000



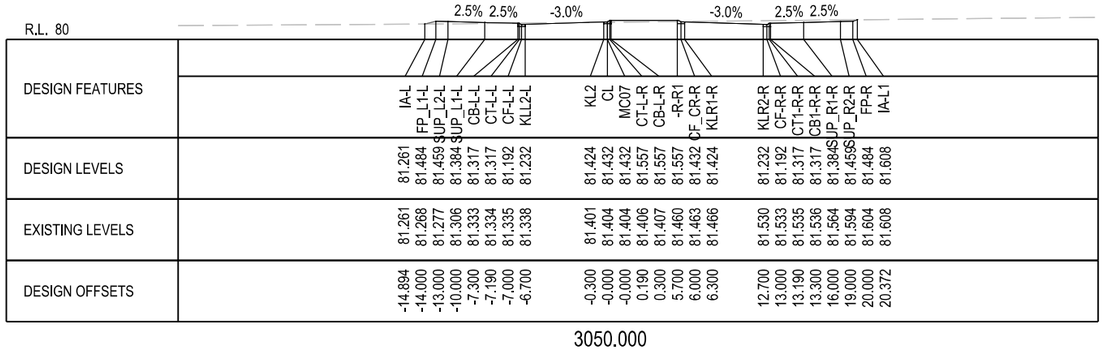
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	81.406	81.645	81.620	81.545	81.477	81.477	81.352	81.392	81.584	81.593	81.593	81.718	81.718	81.718	81.593	81.584	81.392	81.352	81.477	81.477	81.545	81.620	81.645	81.801
EXISTING LEVELS	81.406	81.417	81.428	81.461	81.491	81.492	81.495	81.498	81.569	81.573	81.573	81.575	81.576	81.636	81.640	81.643	81.714	81.718	81.720	81.721	81.751	81.785	81.796	81.801
DESIGN OFFSETS	-14.955	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.469

3094.355



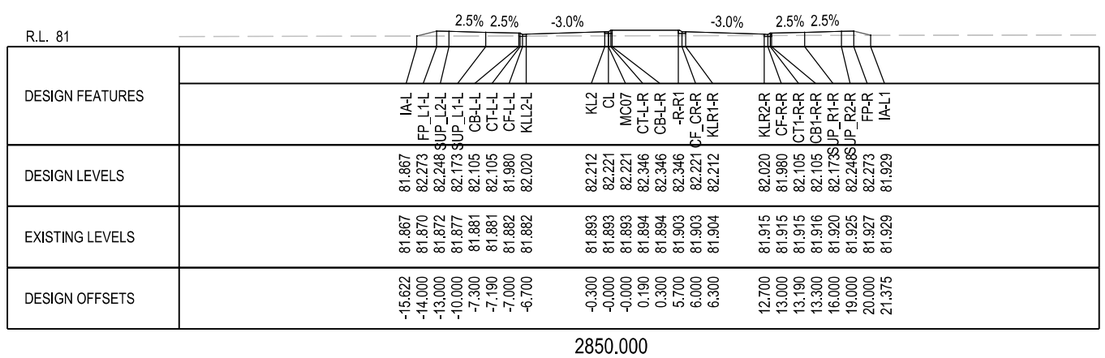
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	81.684	82.023	81.998	81.923	81.855	81.855	81.730	81.770	81.962	81.971	81.971	82.096	82.096	82.096	81.971	81.962	81.770	81.730	81.855	81.855	81.923	81.998	82.023	81.744
EXISTING LEVELS	81.684	81.686	81.688	81.693	81.697	81.697	81.698	81.698	81.709	81.709	81.709	81.709	81.710	81.719	81.719	81.720	81.730	81.731	81.731	81.731	81.736	81.741	81.742	81.744
DESIGN OFFSETS	-15.357	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	0.000	0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.114

2900.000



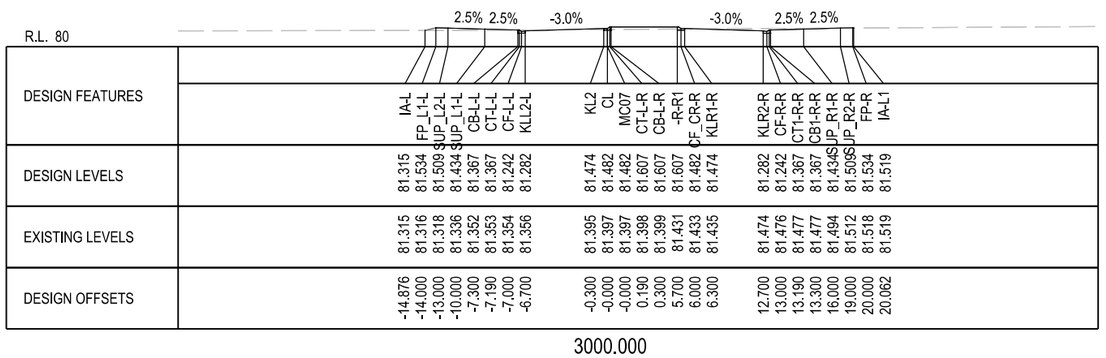
DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	81.261	81.484	81.459	81.384	81.317	81.317	81.192	81.232	81.424	81.432	81.432	81.557	81.557	81.557	81.432	81.424	81.232	81.192	81.317	81.317	81.384	81.459	81.484	81.608
EXISTING LEVELS	81.261	81.268	81.277	81.306	81.333	81.334	81.335	81.338	81.401	81.404	81.404	81.406	81.407	81.460	81.463	81.466	81.530	81.533	81.535	81.536	81.564	81.594	81.604	81.608
DESIGN OFFSETS	-14.894	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.372

3050.000



DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	81.867	82.273	82.248	82.173	82.105	82.105	81.980	82.020	82.212	82.221	82.221	82.346	82.346	82.346	82.221	82.212	82.020	81.980	82.105	82.105	82.173	82.248	82.273	81.929
EXISTING LEVELS	81.867	81.870	81.872	81.877	81.881	81.881	81.882	81.882	81.893	81.893	81.893	81.894	81.894	81.903	81.903	81.904	81.915	81.915	81.915	81.916	81.920	81.925	81.927	81.929
DESIGN OFFSETS	-15.622	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	21.375

2850.000



DESIGN FEATURES	IA-L	FP_L1-L	SUP_L2-L	SUP_L1-L	CB-L-L	CT-L-L	CF-L-L	KLL2-L	KL2	CL	MC07	CT-L-R	CB-L-R	-R-R1	CF_CR-R	KLR1-R	KLR2-R	CF-R-R	CT1-R-R	CB1-R-R	SUP_R1-R	SUP_R2-R	FP-R	IA-L1
DESIGN LEVELS	81.315	81.534	81.509	81.434	81.367	81.367	81.242	81.282	81.474	81.482	81.482	81.607	81.607	81.607	81.482	81.474	81.282	81.242	81.367	81.367	81.434	81.509	81.534	81.519
EXISTING LEVELS	81.315	81.316	81.318	81.336	81.352	81.353	81.354	81.356	81.395	81.397	81.397	81.398	81.399	81.431	81.433	81.435	81.474	81.476	81.477	81.477	81.494	81.512	81.518	81.519
DESIGN OFFSETS	-14.876	-14.000	-13.000	-10.000	-7.300	-7.190	-7.000	-6.700	-0.300	-0.000	-0.000	0.190	0.300	5.700	6.000	6.300	12.700	13.000	13.190	13.300	16.000	19.000	20.000	20.062

3000.000

Appendix C Draft Cost Estimates

Bannockburn SE PSP - Interim works costs Rev 2 - 04 July 2025

Project	Description	Estimated Cost With benchmark cost index
IN-01	East West Link Road and Levy Road	$ 8,355,244.56
IN-02	East West Link Road and Burnside Road	$ 8,510,277.24
IN-03	East West Link Road and South Connector	$ 6,734,603.69
	TOTAL INTERSECTION COST	*$ 23,600,125.49*

BR-01	East-West Link Road	$ 50,299,380.14
	TOTAL BRIDGE COST	$ 50,299,380.14

RD-01-01	East-West Link Road (BR-01 to IN-01) ~ 116m	$ 966,341.13
RD-01-02	East-West Link Road (IN-01 to IN-02) ~ 104m	$ 846,061.59
RD-01-03	East-West Link Road (IN-02 to IN-03) ~ 227m	$ 1,614,828.11
RD-01-04	East-West Link Road (IN-03 to Eastern extent) ~ 752m	$ 5,398,116.26
	TOTAL ROAD SECTION COST	*$ 8,825,347.09*

	TOTAL PROJECT COST	*$ 82,724,852.73*

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 unless otherwise noted. No allowance has been included for utility relocation works, geotechnical testing or WSUD. 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 - East West Link Road and Levy Road

Rev 2 - 04 July 2025

Intersection - Secondary - Connector Signalised Intersection (Benchmark Item 9)

Group	Item	Description	Quantity	Unit	Rate ($)	Benchmark cost index	Amount ($) (With Benchmark cost index)
Siteworks and Earthworks	1.1	Site Preparation	19879	m2	4.96	1.32	$ 130,148.75
	1.2	Earthworks		m3	40.52	1.32	$ -
	1.3	Erosion protection for 1:4 batters	2067	m2	4.29	1.32	$ 11,705.01
Road Pavement	2.1	Secondary Arterial Pavement	6556	m2	133.78	1.32	$ 1,157,722.48
	2.2	Collector Arterial Pavement	2704	m2	112.44	1.32	$ 401,351.08
	2.3	Subgrade Preparation	1852	m2	16.16	1.32	$ 39,506.02
	2.4	Lime stabilisation, 0.5m past BoK	9260	m2	54.22	1.32	$ 662,752.58
Concrete Works	3.1	Kerb and Channel	2067	m	60.9	1.32	$ 166,162.00
	3.2	Traffic Island	337	m2	84.07	1.32	$ 37,363.64
	3.3	SUP/footpath/ Cycle Path	4088	m2	91.94	1.32	$ 496,093.14
	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	800	m	282.96	1.32	$ 298,805.76
	4.3	Drainage Pipe 450mm CR Bfilled	400	m	334.33	1.32	$ 176,526.24
	4.4	Drainage Pipe 600mm CR Bfilled	400	m	550	1.32	$ 290,400.00
	4.5	Drainage - Pits	37	No.	2806.1	1.32	$ 137,049.92
	4.6	Drainage - Subsoil Drainage	2096	m	43.4	1.32	$ 120,075.65
Traffic	5.1	Traffic Signals	4	Item/ per leg	128786.34	1.32	$ 679,991.88
Landscape	6.1	Trees	41	No. m2 m2	363.01	1.32	$ 19,646.10
	6.2	Landscaping	6194	m2	25.16	1.32	$ 205,708.14
	6.3	Topsoil Seeding	6194	m2	8.44	1.32	$ 69,005.43
Street Lighting	7.1	Street Lighting (intersections)	4	Item/ per leg	55617.74	1.32	$ 293,661.67
Miscellaneous	8.1	Linemarking	17436	m2 of pavement	4.09	1.32	$ 94,131.63
	8.2	Regulatory Signage	32	Item	380.39	1.32	$ 16,067.67
	8.3	Landscape Maintenance (intersections)	1.00	Item	88131.43	1.32	$ 116,333.49
	8.4	Tactile Pavers (Hazard only)	24	Item	319.78	1.32	$ 10,130.63
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	0	m3	206	1.32	$ -
	9.2	Rock excavation and removal / sodic soil treatment (capping layer)	1852	m3	116.53	1.32	$ 284,878.49
	9.3	Redundant pavement demolition	0	m3	206	1.32	$ -
Delivery	10.1	Council Fees	1	%	3.25	1	$ 192,244.57
	10.2	VicRoads Fees	1	%	1	1	$ 59,152.17
	10.3	Traffic Management	1	%	5	1	$ 295,760.87
	10.4	Environmental Management	1	%	0.5	1	$ 29,576.09
	10.5	Survey/Design	1	%	5	1	$ 295,760.87
	10.6	Supervision and Project Management	1	%	9	1	$ 532,369.57
	10.7	Site Establishment	1	%	2.5	1	$ 147,880.43
	10.8	Contingency	1	%	15	1	$ 887,282.61
Total		Excluding Delivery				1	$ 5,915,217.39
		Including Delivery					$ 8,355,244.56

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 unless otherwise noted. No allowance has been included for utility relocation works, geotechnical testing or WSUD. 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-02 - East West Link Road and Burnside Road

Rev 2 - 04 July 2025

Intersection - Secondary - Connector Signalised Intersection (Benchmark Item 9)

Group	Item	Description	Quantity	Unit	Rate ($)	Benchmark cost index	Amount ($) (With Benchmark cost index)
Siteworks and Earthworks	1.1	Site Preparation	18510	m2	4.96	1.32	$ 121,190.39
	1.2	Earthworks	6613	m3	40.52	1.32	$ 353,727.38
	1.3	Erosion protection for 1:4 batters	2049	m2	4.29	1.32	$ 11,602.66
Road Pavement	2.1	Secondary Arterial Pavement	6436	m2	133.78	1.32	$ 1,136,591.47
	2.2	Collector Arterial Pavement	2400	m2	112.44	1.32	$ 356,257.70
	2.3	Subgrade Preparation	1767	m2	16.16	1.32	$ 37,699.34
	2.4	Lime stabilisation, 0.5m past BoK	8837	m2	54.22	1.32	$ 632,443.73
Concrete Works	3.1	Kerb and Channel	2049	m	60.9	1.32	$ 164,709.02
	3.2	Traffic Island	347	m2	84.07	1.32	$ 38,489.36
	3.3	SUP/footpath/ Cycle Path	3289	m2	91.94	1.32	$ 399,205.44
	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	790	m	282.96	1.32	$ 295,070.69
	4.3	Drainage Pipe 450mm CR Bfilled	400	m	334.33	1.32	$ 176,526.24
	4.4	Drainage Pipe 600mm CR Bfilled	400	m	550	1.32	$ 290,400.00
	4.5	Drainage - Pits	36	No.	2806.1	1.32	$ 133,345.87
	4.6	Drainage - Subsoil Drainage	2078	m	43.4	1.32	$ 119,040.20
Traffic	5.1	Traffic Signals	4	Item/ per leg	128786.34	1.32	$ 679,991.88
Landscape	6.1	Trees	41	No. m2 m2	363.01	1.32	$ 19,646.10
	6.2	Landscaping	6037	m2	25.16	1.32	$ 200,507.61
	6.3	Topsoil Seeding	6037	m2	8.44	1.32	$ 67,260.90
Street Lighting	7.1	Street Lighting (intersections)	4	Item/ per leg	55617.74	1.32	$ 293,661.67
Miscellaneous	8.1	Linemarking	15415	m2 of pavement	4.09	1.32	$ 83,225.13
	8.2	Regulatory Signage	32	Item	380.39	1.32	$ 16,067.67
	8.3	Landscape Maintenance (intersections)	1.00	Item	88131.43	1.32	$ 116,333.49
	8.4	Tactile Pavers (Hazard only)	24	Item	319.78	1.32	$ 10,130.63
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	0	m3	206	1.32	$ -
	9.2	Rock excavation and removal / sodic soil treatment (capping layer)	1767	m3	116.53	1.32	$ 271,850.49
	9.3	Redundant pavement demolition	0	m3	206	1.32	$ -
Delivery	10.1	Council Fees	1	%	3.25	1	$ 195,811.69
	10.2	VicRoads Fees	1	%	1	1	$ 60,249.75
	10.3	Traffic Management	1	%	5	1	$ 301,248.75
	10.4	Environmental Management	1	%	0.5	1	$ 30,124.88
	10.5	Survey/Design	1	%	5	1	$ 301,248.75
	10.6	Supervision and Project Management	1	%	9	1	$ 542,247.75
	10.7	Site Establishment	1	%	2.5	1	$ 150,624.38
	10.8	Contingency	1	%	15	1	$ 903,746.26
Total		Excluding Delivery				1	$ 6,024,975.03
		Including Delivery					$ 8,510,277.24

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 unless otherwise noted. No allowance has been included for utility relocation works, geotechnical testing or WSUD. 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-03 - East West Link Road and South Connector

Rev 2 - 04 July 2025

Intersection - Secondary - Connector T-Signalised Intersection (Benchmark Item 9)

Group	Item	Description	Quantity	Unit	Rate ($)	Benchmark cost index	Amount ($) (With Benchmark cost index)
Siteworks and Earthworks	1.1	Site Preparation	14715	m2	4.96	1.32	$ 96,339.23
	1.2	Earthworks	5421	m3	40.52	1.32	$ 289,939.53
	1.3	Erosion protection for 1:4 batters	1786	m2	4.29	1.32	$ 10,112.27
Road Pavement	2.1	Secondary Arterial Pavement	5907	m2	133.78	1.32	$ 1,043,072.77
	2.2	Collector Arterial Pavement	1355	m2	112.44	1.32	$ 201,120.43
	2.3	Subgrade Preparation	1452	m2	16.16	1.32	$ 30,980.71
	2.4	Lime stabilisation, 0.5m past BoK	7262	m2	54.22	1.32	$ 519,732.16
Concrete Works	3.1	Kerb and Channel	1786	m	60.9	1.32	$ 143,551.86
	3.2	Traffic Island	182	m2	84.07	1.32	$ 20,222.87
	3.3	SUP/footpath/ Cycle Path	2180	m2	91.94	1.32	$ 264,605.89
	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	560	m	282.96	1.32	$ 209,164.03
	4.3	Drainage Pipe 450mm CR Bfilled	280	m	334.33	1.32	$ 123,568.37
	4.4	Drainage Pipe 600mm CR Bfilled	280	m	550	1.32	$ 203,280.00
	4.5	Drainage - Pits	29	No.	2806.1	1.32	$ 107,417.51
	4.6	Drainage - Subsoil Drainage	1815	m	43.4	1.32	$ 103,962.68
Traffic	5.1	Traffic Signals	3	Item/ per leg	128786.34	1.32	$ 509,993.91
Landscape	6.1	Trees	41	No. m2 m2	363.01	1.32	$ 19,646.10
	6.2	Landscaping	5090	m2	25.16	1.32	$ 169,051.02
	6.3	Topsoil Seeding	5090	m2	8.44	1.32	$ 56,708.69
Street Lighting	7.1	Street Lighting (intersections)	3	Item/ per leg	55617.74	1.32	$ 220,246.25
Miscellaneous	8.1	Linemarking	11622	m2 of pavement	4.09	1.32	$ 62,747.44
	8.2	Regulatory Signage	30	Item	380.39	1.32	$ 15,063.44
	8.3	Landscape Maintenance (intersections)	1.00	Item	88131.43	1.32	$ 116,333.49
	8.4	Tactile Pavers (Hazard only)	18	Item	319.78	1.32	$ 7,597.97
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	0	m3	206	1.32	$ -
	9.2	Rock excavation and removal / sodic soil treatment (capping layer)	1452	m3	116.53	1.32	$ 223,402.39
	9.3	Redundant pavement demolition	0	m3	206	1.32	$ -
Delivery	10.1	Council Fees	1	%	3.25	1	$ 154,955.48
	10.2	VicRoads Fees	1	%	1	1	$ 47,678.61
	10.3	Traffic Management	1	%	5	1	$ 238,393.05
	10.4	Environmental Management	1	%	0.5	1	$ 23,839.31
	10.5	Survey/Design	1	%	5	1	$ 238,393.05
	10.6	Supervision and Project Management	1	%	9	1	$ 429,107.49
	10.7	Site Establishment	1	%	2.5	1	$ 119,196.53
	10.8	Contingency	1	%	15	1	$ 715,179.15
Total		Excluding Delivery				1	$ 4,767,861.02
		Including Delivery					$ 6,734,603.69

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 unless otherwise noted. No allowance has been included for utility relocation works, geotechnical testing or WSUD. 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.

RD-01-01 - East-West Link Road (BR-01 to IN-01) ~ 120m

Rev 2 - 04 July 2025

Road - Secondary Arterial -800m (Modified Benchmark Item 2)

Group	Item	Description	Quanity	Unit	Rate ($)	Benchmark cost index	Amount ($) (With Benchmark cost index)
Siteworks and Earthworks	1.1	Site Preparation	2736	m2	4.96	1.32	$ 17,910.43
	1.2	Soil stabilisation - gypsum treatment	378	m2	4.65	1.32	$ 2,319.10
	1.3	Earthworks	713	m3	40.52	1.32	$ 38,124.34
	1.4	Erosion protection for 1:4 batters	242	m2	4.29	1.32	$ 1,369.51
Road Pavement	2.1	Secondary Arterial Pavement	846	m2	133.78	1.32	$ 149,474.60
	2.2	Collector Arterial Pavement	0	m2	112.44	1.32	$ -
	2.3	Subgrade Preparation	169	m2	16.16	1.32	$ 3,611.17
	2.4	Lime stabilisation, 0.5m past BoK	846	m2	54.22	1.32	$ 60,580.90
Concrete Works	3.1	Kerb and Channel	242	m	60.9	1.32	$ 19,441.31
	3.2	Traffic Island	0	m2	84.07	1.32	$ -
	3.3	SUP/footpath/ Cycle Path	601	m2	91.94	1.32	$ 72,979.88
	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	120	m	282.96	1.32	$ 44,820.86
	4.3	Drainage Pipe 450mm CR Bfilled	40	m	334.33	1.32	$ 17,652.62
	4.4	Drainage Pipe 600mm CR Bfilled	120	m	550	1.32	$ 87,120.00
	4.5	Drainage - Pits	3	No.	2806.1	1.32	$ 11,112.16
	4.6	Drainage - Subsoil Drainage	242	m	43.4	1.32	$ 13,854.72
Traffic	5.1	Traffic Signals	0	Item/ per leg	128786.3	1.32	$ -
Landscape	6.1	Trees	16	No. m2 m2	363.01	1.32	$ 7,762.61
	6.2	Landscaping	1288	m2	25.16	1.32	$ 42,769.00
	6.3	Topsoil Seeding	1288	m2	8.44	1.32	$ 14,346.99
Street Lighting	7.1	Street Lighting (Road)	120	m	225.67	1.32	$ 35,746.13
Miscellaneous	8.1	Linemarking	2049	m2 of pavement	4.09	1.32	$ 11,062.92
	8.2	Regulatory Signage	2	Item	380.39	1.32	$ 1,004.23
	8.3	Landscape Maintenance (road)	1288	m2	2.96	1.32	$ 5,031.65
	8.4	Tactile Pavers (Hazard only)	0	Item	319.78	1.32	$ -
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	0	m3	206	1.32	$ -
	9.2	Rock excavation and removal / sodic soil treatment (capping layer)	169	m3	116.53	1.32	$ 26,040.18
	9.3	Redundant pavement demolition	0	m3	206	1.32	$ -
Delivery	10.1	Council Fees	1	%	3.25	1	$ 22,234.40
	10.2	VicRoads Fees	1	%	1	1	$ 6,841.35
	10.3	Traffic Management	1	%	5	1	$ 34,206.77
	10.4	Environmental Management	1	%	0.5	1	$ 3,420.68
	10.5	Survey/Design	1	%	5	1	$ 34,206.77
	10.6	Supervision and Project Management	1	%	9	1	$ 61,572.18
	10.7	Site Establishment	1	%	2.5	1	$ 17,103.38
	10.8	Contingency	1	%	15	1	$ 102,620.30
		Excluding Delivery				1	$ 684,135.32
		Including Delivery					$ 966,341.13

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 unless otherwise noted. No allowance has been included for utility relocation works, geotechnical testing or WSUD. 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.

RD-01-02 - East-West Link Road (IN-01 to IN-02) ~ 104m

Rev 2 - 04 July 2025

Road - Secondary Arterial -800m (Modified Benchmark Item 2)

Group	Item	Description	Quanity	Unit	Rate ($)	Benchmark cost index	Amount ($) (With Benchmark cost index)
Siteworks and Earthworks	1.1	Site Preparation	2292	m2	4.96	1.32	$ 15,004.42
	1.2	Earthworks	636	m3	40.52	1.32	$ 33,991.20
	1.3	Erosion protection for 1:4 batters	208	m2	4.29	1.32	$ 1,179.43
Road Pavement	2.1	Secondary Arterial Pavement	729	m2	133.78	1.32	$ 128,788.46
	2.2	Collector Arterial Pavement	0	m2	112.44	1.32	$ -
	2.3	Subgrade Preparation	146	m2	16.16	1.32	$ 3,111.41
	2.4	Lime stabilisation, 0.5m past BoK	729	m2	54.22	1.32	$ 52,196.97
Concrete Works	3.1	Kerb and Channel	208	m	60.9	1.32	$ 16,742.96
	3.2	Traffic Island	0	m2	84.07	1.32	$ -
	3.3	SUP/footpath/ Cycle Path	625	m2	91.94	1.32	$ 75,847.17
	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	104	m	282.96	1.32	$ 38,844.75
	4.3	Drainage Pipe 450mm CR Bfilled	40	m	334.33	1.32	$ 17,652.62
	4.4	Drainage Pipe 600mm CR Bfilled	104	m	550	1.32	$ 75,504.00
	4.5	Drainage - Pits	3	No.	2806.1	1.32	$ 11,112.16
	4.6	Drainage - Subsoil Drainage	208	m	43.4	1.32	$ 11,931.77
Traffic	5.1	Traffic Signals	0	Item/ per leg	128786.34	1.32	$ -
Landscape	6.1	Trees	14	No. m2 m2	363.01	1.32	$ 6,727.59
	6.2	Landscaping	937	m2	25.16	1.32	$ 31,133.80
	6.3	Topsoil Seeding	937	m2	8.44	1.32	$ 10,443.93
Street Lighting	7.1	Street Lighting (Road)	104	m	225.67	1.32	$ 30,979.98
Miscellaneous	8.1	Linemarking	1979	m2 of pavement	4.09	1.32	$ 10,685.60
	8.2	Regulatory Signage	2	Item	380.39	1.32	$ 1,004.23
	8.3	Landscape Maintenance (road)	937	m2	2.96	1.32	$ 3,662.80
	8.4	Tactile Pavers (Hazard only)	0	Item	319.78	1.32	$ -
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	0	m3	206	1.32	$ -
	9.2	Rock excavation and removal / sodic soil treatment (capping layer)	146	m3	116.53	1.32	$ 22,436.42
	9.3	Redundant pavement demolition	0	m3	206	1.32	$ -
Delivery	10.1	Council Fees	1	%	3.25	1	$ 19,466.90
	10.2	VicRoads Fees	1	%	1	1	$ 5,989.82
	10.3	Traffic Management	1	%	5	1	$ 29,949.08
	10.4	Environmental Management	1	%	0.5	1	$ 2,994.91
	10.5	Survey/Design	1	%	5	1	$ 29,949.08
	10.6	Supervision and Project Management	1	%	9	1	$ 53,908.35
	10.7	Site Establishment	1	%	2.5	1	$ 14,974.54
	10.8	Contingency	1	%	15	1	$ 89,847.25
		Excluding Delivery				1	$ 598,981.65
		Including Delivery					$ 846,061.59

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 unless otherwise noted. No allowance has been included for utility relocation works, geotechnical testing or WSUD. 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.

RD-01-03 - East-West Link Road (IN-02 to IN-03) ~ 227m

Rev 2 - 04 July 2025

Road - Secondary Arterial -800m (Modified Benchmark Item 2)

Group	Item	Description	Quanity	Unit	Rate ($)	Benchmark cost index	Amount ($) (With Benchmark cost index)
Siteworks and Earthworks	1.1	Site Preparation	3630	m2	4.96	1.32	$ 23,763.68
	1.2	Earthworks	1248	m3	40.52	1.32	$ 66,738.89
	1.3	Erosion protection for 1:4 batters	454	m2	4.29	1.32	$ 2,569.32
Road Pavement	2.1	Secondary Arterial Pavement	1588	m2	133.78	1.32	$ 280,436.43
	2.2	Collector Arterial Pavement	0	m2	112.44	1.32	$ -
	2.3	Subgrade Preparation	318	m2	16.16	1.32	$ 6,775.08
	2.4	Lime stabilisation, 0.5m past BoK	1588	m2	54.22	1.32	$ 113,658.72
Concrete Works	3.1	Kerb and Channel	454	m	60.9	1.32	$ 36,473.60
	3.2	Traffic Island	0	m2	84.07	1.32	$ -
	3.3	SUP/footpath/ Cycle Path	681	m2	91.94	1.32	$ 82,601.19
	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	227	m	282.96	1.32	$ 84,786.13
	4.3	Drainage Pipe 450mm CR Bfilled	40	m	334.33	1.32	$ 17,652.62
	4.4	Drainage Pipe 600mm CR Bfilled	227	m	550	1.32	$ 164,802.00
	4.5	Drainage - Pits	6	No.	2806.1	1.32	$ 22,224.31
	4.6	Drainage - Subsoil Drainage	454	m	43.4	1.32	$ 25,992.68
Traffic	5.1	Traffic Signals	0	Item/ per leg	128786.3	1.32	$ -
Landscape	6.1	Trees	31	No. m2 m2	363.01	1.32	$ 14,684.26
	6.2	Landscaping	1361	m2	25.16	1.32	$ 45,197.15
	6.3	Topsoil Seeding	1361	m2	8.44	1.32	$ 15,161.52
Street Lighting	7.1	Street Lighting (Road)	227	m	225.67	1.32	$ 67,619.76
Miscellaneous	8.1	Linemarking	2949	m2 of pavement	4.09	1.32	$ 15,922.78
	8.2	Regulatory Signage	4	Item	380.39	1.32	$ 2,008.46
	8.3	Landscape Maintenance (road)	1361	m2	2.96	1.32	$ 5,317.31
	8.4	Tactile Pavers (Hazard only)	0	Item	319.78	1.32	$ -
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	0	m3	206	1.32	$ -
	9.2	Rock excavation and removal / sodic soil treatment (capping layer)	318	m3	116.53	1.32	$ 48,855.22
	9.3	Redundant pavement demolition	0	m3	206	1.32	$ -
Delivery	10.1	Council Fees	1	%	3.25	1	$ 37,155.34
	10.2	VicRoads Fees	1	%	1	1	$ 11,432.41
	10.3	Traffic Management	1	%	5	1	$ 57,162.06
	10.4	Environmental Management	1	%	0.5	1	$ 5,716.21
	10.5	Survey/Design	1	%	5	1	$ 57,162.06
	10.6	Supervision and Project Management	1	%	9	1	$ 102,891.70
	10.7	Site Establishment	1	%	2.5	1	$ 28,581.03
	10.8	Contingency	1	%	15	1	$ 171,486.17
		Excluding Delivery				1	$ 1,143,241.14
		Including Delivery					$ 1,614,828.11

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 unless otherwise noted. No allowance has been included for utility relocation works, geotechnical testing or WSUD. 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.

RD-01-04 - East-West Link Road (IN-03 to Eastern extent) ~ 752m

Rev 2 - 04 July 2025

Road - Secondary Arterial -800m (Modified Benchmark Item 2)

Group	Item	Description	Quanity	Unit	Rate ($)	Benchmark cost index	Amount ($) (With Benchmark cost index)
Siteworks and Earthworks	1.1	Site Preparation	12043	m2	4.96	1.32	$ 78,845.53
	1.2	Earthworks	4138	m3	40.52	1.32	$ 221,348.07
	1.3	Erosion protection for 1:4 batters	1504	m2	4.29	1.32	$ 8,517.91
Road Pavement	2.1	Secondary Arterial Pavement	5265	m2	133.78	1.32	$ 929,683.44
	2.2	Collector Arterial Pavement	0	m2	112.44	1.32	$ -
	2.3	Subgrade Preparation	1053	m2	16.16	1.32	$ 22,460.28
	2.4	Lime stabilisation, 0.5m past BoK	5265	m2	54.22	1.32	$ 376,793.51
Concrete Works	3.1	Kerb and Channel	1504	m	60.9	1.32	$ 120,918.61
	3.2	Traffic Island	10	m2	84.07	1.32	$ 1,076.55
	3.3	SUP/footpath/ Cycle Path	2256	m2	91.94	1.32	$ 273,789.88
	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	752	m	282.96	1.32	$ 280,877.41
	4.3	Drainage Pipe 450mm CR Bfilled	210	m	334.33	1.32	$ 92,676.28
	4.4	Drainage Pipe 600mm CR Bfilled	752	m	550	1.32	$ 545,952.00
	4.5	Drainage - Pits	19	No.	2806.1	1.32	$ 70,376.99
	4.6	Drainage - Subsoil Drainage	1504	m	43.4	1.32	$ 86,171.88
Traffic	5.1	Traffic Signals	0	Item/ per leg	128786.34	1.32	$ -
Landscape	6.1	Trees No. m2 m2	102		363.01	1.32	$ 48,645.66
	6.2	Landscaping	4512	m2	25.16	1.32	$ 149,858.14
	6.3	Topsoil Seeding	4512	m2	8.44	1.32	$ 50,270.38
Street Lighting	7.1	Street Lighting (Road)	752	m	225.67	1.32	$ 224,009.07
Miscellaneous	8.1	Linemarking	9777	m2 of pavement	4.09	1.32	$ 52,782.20
	8.2	Regulatory Signage	14	Item	380.39	1.32	$ 7,029.61
	8.3	Landscape Maintenance (road)	4512	m2	2.96	1.32	$ 17,630.37
	8.4	Tactile Pavers (Hazard only)	0	Item	319.78	1.32	$ -
Other	9.1	Demolition of existing concrete kerbs, footpath, islands	0	m3	206	1.32	$ -
	9.2	Rock excavation and removal / sodic soil treatment (capping layer)	1053	m3	116.53	1.32	$ 161,961.45
	9.3	Redundant pavement demolition	0	m3	206	1.32	$ -
Delivery	10.1	Council Fees	1	%	3.25	1	$ 124,204.44
	10.2	VicRoads Fees	1	%	1	1	$ 38,216.75
	10.3	Traffic Management	1	%	5	1	$ 191,083.76
	10.4	Environmental Management	1	%	0.5	1	$ 19,108.38
	10.5	Survey/Design	1	%	5	1	$ 191,083.76
	10.6	Supervision and Project Management	1	%	9	1	$ 343,950.77
	10.7	Site Establishment	1	%	2.5	1	$ 95,541.88
	10.8	Contingency	1	%	15	1	$ 573,251.28
		Excluding Delivery				1	$ 3,821,675.23
		Including Delivery					$ 5,398,116.26

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 unless otherwise noted. No allowance has been included for utility relocation works, geotechnical testing or WSUD. 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.

BR-01 - East-West Link Road
Cost Estimate

Rev 2 - 04 July 2025

Group	Item	Description		Quanity	Unit	Rate ($)	Benchmark cost index	Amount ($) (With Benchmark cost index)	Total
									$610,000.00
Site Establishment	1.1	Allowance for general site establishment, temp fencing, etc		1	Set	$250,000.00	1	$250,000.00	
	1.2	Services identifications		0	Day	$3,500.00	1	$0.00	
	1.3	Services proving		0	Day	$3,500.00	1	$0.00	
	1.4	Access Tracks	750m x 6m, difficult terrain	800	LM	$450.00	1	$360,000.00	
Bridge Works				3962	m2	$5,852.79			$23,188,753.93
		Key Measurement							
		Abutments		2	*No*				
		Piers		7	*No*				
		Bridge Deck	*280m x 14.15m*	*3962*	*m2*				
		Bridge Length		*280*	*LM*				
		Piles to Piers		56	*Piles*				
		Piles to Abutments	*2 x 8*	16	*Piles*				
		Volume per Pile	*1200 Dia, 20m nominal depth*	*22.6*	*m3 each, without waste*				
		Pile Caps		14	*Pile Caps*				
		Volume per Pile Cap, approx.	*4.5 x 4.5 x 1.5, each*	*30.4*	*m3 each, without waste*				
		Formwork at each Pile Cap		27	*m2 each*				
		Pier Leg Heights (excluding Pier Head Depth)	*Pier 1*	4	*LM*				
			Pier 2	8	*LM*				
			Pier 3	10	*LM*				
			Pier 4	13	*LM*				
			Pier 5	16	*LM*				
			Pier 6	17	*LM*				
			Pier 7	10	*LM*				
			Total	78	*LM*				
			Average	*11.1*	*LM*				
		Super Tee Beams, 1800 deep	*280, 8 spans*	35	*LM Each*				
		Super Tee Beams, count	*7 Beams per Spans*	56	*Beams*				
		Piles		72	Each	$45,244.80			
				1628.813	m3 Rate Only	$2,000.00	1		
	2.1	Excavation to Piles		1628.813	m3	$450.00	1	$732,965.76	
	2.2	Concrete to Piles		1628.813	m3	$700.00	1	$1,140,168.96	
	2.3	Reo Cages to Piles - 200 kg/m3		325.7626	Tons	$3,800.00	1	$1,237,897.73	
	2.4	Disposals		1628.813	m3	$90.00	1	$146,593.15	
		Pile Caps							
	2.5	Excavation for Pile Caps		638.4	m3	$90.00	1	$57,456.00	
	2.6	Disposals		425.6	m3	$50.00	1	$21,280.00	
	2.7	Backfilling at Pile Caps		212.8	m3	$90.00	1	$19,152.00	
	2.8	Concrete to Pile Caps		425.6	m3	$600.00	1	$255,360.00	
	2.9	Reo to Pile Caps, 150kg/m3		63.84	Tons	$3,800.00	1	$242,592.00	
	2.10	Formwork to Pile Caps		378	m2	$200.00	1	$75,600.00	
		Piers							
	2.11	Concrete to Piers - Legs Only	2.5 wide, 2.0m deep	780	m3	$750.00	1	$585,000.00	
	2.12	Reo to Pier Legs, 200 kg/m3		156	Tons	$3,900.00	1	$608,400.00	
	2.13	Formwork to Pier Legs		1596	m2	$500.00	1	$798,000.00	
	2.14	Concrete to Pier Heads		862.5556	m3	$750.00	1	$646,916.67	
	2.15	Reo to Pier Heads, 200kg/m^3		172.5111	Tons	$3,900.00	1	$672,793.33	
	2.16	Formwork to Pier Heads, sides and soffits		1259.222	m2	$600.00	1	$755,533.33	
	2.17	Lateral Restraint Blocks, 2 per Pier		14	Sets	$5,000.00	1	$70,000.00	
		Abutments							
		Piles to Abutments	8 each x 2 abutments	16	Piles	Included			
	2.18	Concrete to Abutments		112	m3	$700.00	1	$78,400.00	
	2.19	Reo to Abutments, 200kg/m^3		22.4	Tons	$3,800.00	1	$85,120.00	
	2.20	Formworks		140	m2	$450.00	1	$63,000.00	
		Super Tee Deck							
	2.21	Supply Super Tee Beams, 1800 Deep - 1.7 tons/m or ~55t each - based on $2900/m, $4200/m3, say - Cross Section ~0.7m2 - Volume ~32.2 x 0.7 = 22.5m3 - https://www.nationalprecast.com.au/wp-content/uploads/2015/10/Products-Super-Tees.pdf	Super Tee Beam Pricing is current, and checked with Jacobs Estimating Teams, and current supply prices (late 2024)	56	Each	$93,670.00	1	$5,245,520.00	
	2.22	Placement of Super Tee Beams		56	Each	$65,000.00	1	$3,640,000.00	
	2.23	Bridge Bearings		112	Each	$3,750.00	1	$420,000.00	
	2.24	Stitching of Super Tees		56	Each	$5,000.00	1	$280,000.00	
		Bridge Deck							
	2.25	Formwork to Super Tees - 280m x 1m x 7 beams		1960	m2	$275.00	1	$539,000.00	
	2.26	Concrete to Deck Slab, 250 thick		990.5	m3	$650.00	1	$643,825.00	
	2.27	Reo to Deck Slab		198.1	Tons	$3,700.00	1	$732,970.00	
	2.28	Formwork to edges		560	LM	$350.00	1	$196,000.00	
	2.29	Bridge Barrier, including edge drop section	6m each end longer than bridge plus 36m approach	364	LM	$1,900.00	1	$691,600.00	
	2.30	Bridge Barrier, on Bridge Deck	6m each end longer than bridge	292	LM	$1,200.00	1	$350,400.00	
	2.31	Bridge Barrier Throw Screen, 3000mm high	6m each end longer than bridge	292	LM	$3,000.00	1	$876,000.00	
		Bridge Sundries							
	2.32	Light Poles	Every 50m	6	No	$25,000.00	1	$150,000.00	
	2.33	Power Connection		1	Set	$100,000.00	1	$100,000.00	
	2.34	Drainage Lines		280	LM	$450.00	1	$126,000.00	
	2.35	Service Route	Allowance	280	LM	$450.00	1	$126,000.00	
		Approach Slabs							
	2.36	Allowance for approach slabs	2 each x 3m x 14.15m	84.9	m2	$400.00	1	$33,960.00	
		Abutment Civils							
	2.37	Site scraps		2100	m2	$15.00	1	$31,500.00	
	2.38	Engineered Filling		2000	m3	$180.00	1	$360,000.00	
	2.39	Road Works	2 x 14.15m x 50m	1415	m2	$250.00	1	$353,750.00	
Spare									
	3.1	Not required							$0.00
Commisioning									
	4.1	Commisioning Allowance	N/A						$0.00
									$10,709,439.27
Contractor's Overhead Costs and Profit	5.1	Contractor's Project Management and Site Supervision including - temporary works design - management plans - safety, quality, environment, comms - Site meetings with Superintendent	Keep high, for small project. Specialised work, slightly remote	30%	of	$23,798,753.93		$7,139,626.18	
	5.2	Contractor's Overheads and Profit		10%	of	$23,798,753.93		$2,379,875.39	
	5.3	Environmental Monitoring Costs - Air, Noise, Water, etc. - usually not required			Item	$0.00		0	
	5.4	Engineering Design - Contractor's Detailed Design		5%	of	$23,798,753.93		$1,189,937.70	
TOTAL Constructed Cost (excl. GST)				3962	m2	$8,709.79		$34,508,193.20	$34,508,193.20
Indirect Project Costs									$5,731,310.91
		Consultant Design Fees							
		Geotechnical Investigations		1	Item	75000	1	$75,000.00	
		Engineering Design - including detailed design		8%	of	$34,508,193.20	1	$2,760,655.46	
		Client Project Management and Communications							
		Client Project Management and Communications		8%	of	$34,508,193.20	1	$2,760,655.46	
		Due Diligence and Site Investigations		NONE					
		CHMP Due Diligence			Item			$15,000.00	
		Statutory Planning Due Diligence			Item			$10,000.00	
		Flora and Fauna Due Diligence			Item			$10,000.00	
		CHMP field investigations and formal CHMP standard			Item			$25,000.00	
		Flora & Fauna field investigation and report - standard			Item			$25,000.00	
		Planning permit report addressing triggers			Item			$20,000.00	
		Land acquisition including rezoning and legal costs			Item			No allowance	
		Easement Acquisition including Legal costs			Item			No allowance	
		Approvals/permit applications by Client/consultant							
		Roads			Item			$10,000.00	
		Rail Track			Item			$0.00	
		Drainage			Item			$20,000.00	
		Gas/Power transmission			Item			$0.00	
		Other Costs							
TOTAL ESTIMATED COST (EXCL GST)									$40,239,504.12
Contingency Allowance				25%					$10,059,876.03
TOTAL INCLUDING CONTINGENCY ALLOWANCE								Excl GST	$50,299,380.14

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 unless otherwise noted. No allowance has been included for utility relocation works, geotechnical testing or WSUD. 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.

Appendix D VPA comment response

Bannockburn South East - Transport Design and Costs_DRAFT by SMEC				
Comment ID	Comment by	Topic/Section/Plan/Item	Comment	SMEC Response
1	VPA engineering	Costings - Intersections	Refer to the highlighted items in the following sheets "IN-01", "IN-02", "IN-03" within this Excel.	Refer response to comment 2 below which details SMEC's changes to cost estimates. Additionally, regulatory signage numbers have been validated. Please refer to the pdf mark up provided which shows an example regulatory signage layout.
2	VPA engineering	Costings - Intersections	Key items for SMEC to review/check are: •Overall costs are about double the current VPA benchmark item for a similar type of intersection. oBased on quantities such as road pavement, the Intersections appear to be a little larger than the benchmarks – so some additional cost is expected. oSodic sols allowances are not included in the benchmarks – so some additional cost is expected. •Quantifies for site preparation, earthworks and SUP? •Drainage pipes and pits: oAppears to be about double the quantity which would be needed. •Landscaping and topsoil: oQuantity appears overly high •Street lighting: oThe benchmarks make an allowance per intersection leg – i.e. 4 No. for a cross intersection @ $56k per leg. oSMEC quantity of 14 and 12 should be 4 and 3 respectively These items could be incorrectly adding an additional $1m to $2m.	- Overall costs are now approximately 15% lower for each intersection - Quantities for site preparation have been adjusted based on the fact that Landscaping has reduced to being limited to 3.0m either side of the paths or back of kerb which is a more realistic approach. Earthworks formula (pavement boxing estimate) and the SUPs have been validated to be correct, therefore there has been no significant change. - Drainage pipes and pits has been validated to be correct. Please refer to the pdf mark up provided which shows an example drainage layout. The lengths equate to percentages adopted of the total leg lengths, and pit spacing. No change has been made. - Landscaping has reduced based on landscaping areas to be limited to 3.0m either side of the paths or back of kerb which is a more realistic approach - Street lighting is reduced at intersections due to updating the approach to correctly applying it per leg as opposed to the number of light poles. Street lighting is increased for road costings due to updating the approach to correctly applying it per linear metre as opposed to the number of light poles - Overall costs are now approximately 15% lower for each intersection
3	VPA engineering	Costings - Roads	OK.	
4	VPA engineering	Costings - Bridge	This is a very detailed cost sheet and is based on the previous Jacobs estimate from their feasibility study. The SMEC cost is comparable by adjusting the Jacobs cost down to reflect the shorter and narrower bridge. Due to the relatively high cost of this item, SMEC should check all items in the cost sheet to ensure they are confident they have these correct and can substantiate if needed via a panel.	The detailed bottom-up costing has been based on rates provided by Jacob's in their original Options assessment. This costing results in a unit cost of $180,000 per metre length of bridge. This cost is comparable to the VPA Benchmark Infrastructure Report (April 2019) for a 100m long, 14.3m wide Super-T bridge ($134,190/m), noting the significant increase in construction costs since the report was produced. It's emphasised that providing costings at this early concept stage is indicative only due to the many variables and unknowns. The values provided are not intended for use in construction pricing and do not constitute a bill of quantities. If more certainty is required, a quantity surveyor should be engaged.
5	VPA engineering	Appendix A - IN-03 (Drawing 3003)	IN03 – remove through arrow shown on southern approach as it is a T-intersection	Arrow has been updated to be a left turn arrow only
6	VPA engineering	Appendix A - RD-01	East West arterial – west of Burnside Road - add shared path to both sides as interim works up to the bridge. There is planned development as part of the PSP on both sides	SUP has been added to the north side of the bridge
7	VPA engineering	Appedix A - RD-01	East West arterial – east of Burnside Road a. Consider the shared path as ultimate works on north side only (i.e. consider deleting this as a construction cost item). There is existing residential on the north side. b.Retain the shared path on the south side as interim works, given there is planned development as part of the PSP on the south side	Shared path on the north side of the east-west link road, east of burnside road has been removed. A path connection from IN-03 to the existing path (gravel) has been added to provide better path connectivity in the interim stage.
8	VPA planning	Appendix C - Draft Cost Estimates	Table of interim works costs > Update the estimated cost for IN-02	Table of interim works costs for IN-02 has been updated.

Legend:
375mm pipe
450mm pipe
600mm pipe
Pits

N

LEVY ROAD

600 700 800 900 1000 1100 1200

IN-01

EAST-WEST LINK ROAD

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.

BEFORE YOU DIG www.byda.com.au

FINAL CONCEPT DESIGN

ISSUE	APP'D	DATE	AMENDMENT
C	AD	26.05.25	FINAL CONCEPT DESIGN
B	AD	30.04.25	FINAL CONCEPT DESIGN
A	AD	07.03.25	DRAFT CONCEPT DESIGN

GENERAL NOTES

smec

DESIGNED M CHRISTIE
APPROVED A DONATO
CAT:
PROJ:
FILE: 30043502T--3001.dgn

Victorian Planning Authority

SCALE OF METRES
HOR 0 20 40
VER

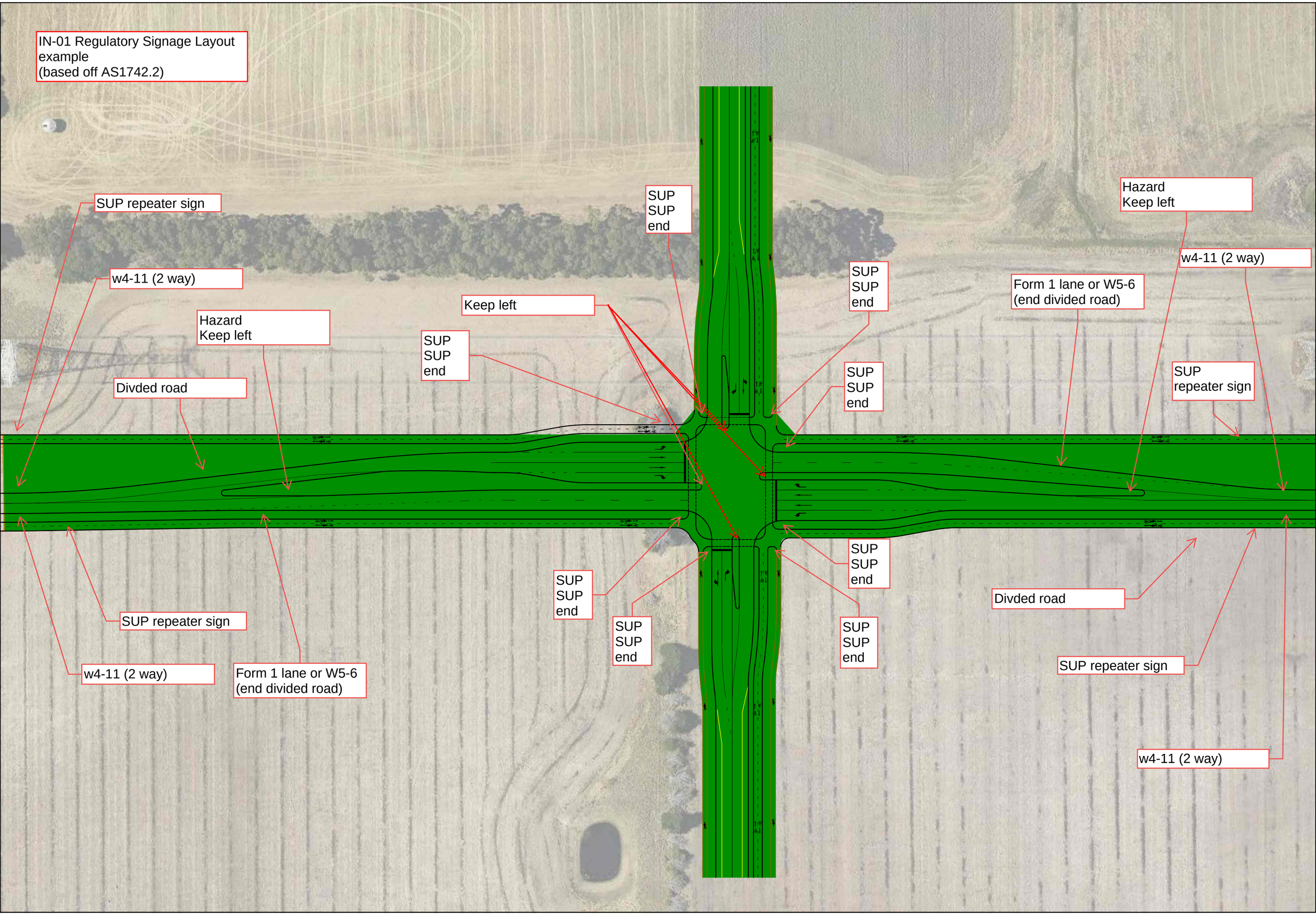
BANNOCKBURN SOUTH EAST PSP
VICTORIAN PLANNING AUTHORITY
GENERAL ALIGNMENT PLAN
IN-01

FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
30043502T	-	08	-3001	C

26/05/2025 5:37:22 PM Default 30043502T--3001.dgn

MC16969 Standard_VR_PDF_SMEC.pltcfg mscol2_issue.tbl V:_Vault\Projects\3004\30043502T\110_CADD\CAD\DGN\DRAWINGS\30043502T--3001.dgn

IN-01 Regulatory Signage Layout
example
(based off AS1742.2)



7 May 2025

BANNOCKBURN SOUTH EAST - DRAFT CONCEPT DRAWINGS – SMEC – 30 APRIL 2025
ISP COMMENTS

Dwg No.	Project	Sheet	Description	ISP Comments
02	Drawing Index	1	Drawing Index	No comments - OK
03	Key Plan	1	Key Plan	Black linework for road on west side of BR-01: • As presented, it appears to be a DCP project, but it is not. • Include description in legend sheet or a note on this drawing or delete linework. Linework has been trimmed to the extent of the bridge on the west side
04	Notes Legend	1	Notes Legend	Black linework for road on west side of BR-01: • Include a note, as above. No action as linework has been trimmed to the extent of the bridge on the west side
05	Typical Sections	1	Secondary Arterial & Connector Street	No comments - OK
06	Typical Sections	2	Bridge	What is the “typical” clearance (or range) between the interim and future duplicated structure. 3.5m. Dimension add to the typical section. This offset is consistent with the offset in the Bridge Feasibility Report.
07	Typical Sections	3	Burnside Road	No comments - OK
3001	IN-01	1	Plan Layout	• Check and if necessary, correct the scale bar in the title block Scale bar was incorrect – it has now been fixed

				• Confirm why a kink is needed in the southern road reserve boundary between Ch600 and CH700 The intent of this kink was too allow for any necessary road works on the approach to the bridge abutment. This road reserve can be confirmed at detailed design with more detailed design modelling. • Why is there an offset from the edge of the path to the southern road reserve boundary? Answer as above.
3002	IN-02	1	Plan Layout	Check and if necessary, correct the scale bar in the title block Scale bar was incorrect – it has now been fixed
3003	IN-03	1	Plan Layout	Check and if necessary, correct the scale bar in the title block Scale bar was incorrect – it has now been fixed
5001	RD-01-01	1	Plan Layout	Check and if necessary, correct the scale bar in the title block Scale bar was incorrect – it has now been fixed
5002	RD-01-02	1	Plan Layout	Check and if necessary, correct the scale bar in the title block Scale bar was incorrect – it has now been fixed
5003	RD-01-03	1	Plan Layout	Check and if necessary, correct the scale bar in the title block Scale bar was incorrect – it has now been fixed
5004	RD-01-04	1	Plan Layout	Check and if necessary, correct the scale bar in the title block Scale bar was incorrect – it has now been fixed
5005	RD-01-04	2	Plan Layout	Check and if necessary, correct the scale bar in the title block Scale bar was incorrect – it has now been fixed
7001	MC01	1	Longitudinal Section	In future documentation, we need to show the bridge longitudinal section with piers, abutments etc. Bridge elevation has been provided, showing 8x35m spans with 7 piers.
7002	MC01	2	Longitudinal Section	No comments – OK
7003	MC01	3	Longitudinal Section	No comments – OK
7004	MC01	4	Longitudinal Section	No comments – OK

7005	MC01	5	Longitudinal Section	No comments – OK
8001	Pavement Profiles	1	Pavement Profiles	No comments - OK
App B	Cross Sections	1	CH00 – CH250	No comments - OK
App B	Cross Sections	2	CH300-CH450	No comments - OK
App B	Cross Sections	3	CH500-CH700	No comments - OK
App B	Cross Sections	4	CH750 to CH1000	No comments - OK
App B	Cross Sections	5	CH1050-CH1300	No comments - OK
App B	Cross Sections	6	CH1350-CH1600	No comments - OK
App B	Cross Sections	7	CH1650-CH1900	No comments - OK
App B	Cross Sections	8	CH1950-CH2200	No comments - OK
App B	Cross Sections	9	CH2250-CH2500	No comments - OK
App B	Cross Sections	10	CH2550-CH2800	No comments - OK
App B	Cross Sections	11	CH2850-CH3094.355	No comments - OK

SMEC Melbourne

Wurundjeri Country
Collins Square, Tower 4, Level 20, 727 Collins St, Docklands VIC 3008

PO Box 23027, Docklands VIC 8012

Phone: +61 3 9514 1500

Email: melbourne@smec.com

engineering positive change

SMEC simplifies the complex. We unlock the potential of our people to look at infrastructure differently, creating better outcomes for the future.

www.smec.com