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#### 1 EXECUTIVE SUMMARY

Yarra Trams is committed to supporting vibrant streets, including the enhancements to trading opportunities and street life that Parklets offer. Trams and hospitality precincts have great synergies. This document is intended to ensure Parklet developments are safe and compatible with tram operations and associated infrastructure.

This document identifies the requirements for Yarra Trams to approve a Parklet application for the installation of a Parklet adjacent or near tram corridors. Factors considered are proximity to Yarra Trams infrastructure, Yarra Trams operational requirements, including accessibility, and Major Electricity Company electrical infrastructure.

#### 2 CONTEXT

The establishment of Parklets may create risk to the public and tram operations. This document has been developed to provide guidance on applications for Parklets adjacent to tram corridors that may increase risk including:

- 1. potential increased consequence and risk of public injury in the event of a tram derailment;
- 2. electrical safety risks which may result from Earth Potential Rise between tramway rail systems and alternative earthing systems;
- 3. risks to accessibility to public transport facilities;
- 4. operational risks from difficulties that may be created for inspections and reactive works; and
- 5. risk of contact with live electrical apparatus.

This document details Yarra Trams requirements concerning the design and construction of Parklets. However, approval provided by Yarra Trams pursuant to this document is not considered as approval to proceed with construction. The applicant must ensure all other approvals and permits are obtained, including those required from the local municipality in which the Parklet is proposed to be installed.

No construction work is to commence without approval by Yarra Trams under this document. Factors such as site specific risks around the Parklet installations shall be considered and risk assessed so far as is reasonably practical (SFAIRP). Risk consideration shall include the complexity and proximity of the electrical and mechanical infrastructure, and the operational risks that may arise from both normal and disrupted tram operations. This risk assessment will address any increase in risk around this modification to public space and the use of this space by members of the public in the vicinity of tram corridors and assets. All plans for additions of Parklets that fall within the application process must be assessed by Yarra Trams and relevant designers of Parklets to ensure that risks are adequately managed prior to any Yarra Trams approval.

#### **Definition of a Parklet**

On-road hospitality spaces, otherwise known as Parklets, are an extension of available floor space of a commercial premise. They are typically structures or platforms created for public seating installed within kerbside parking spaces, providing open-air social interaction and dining in front of a respective business.

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#### 3 PURPOSE, SCOPE AND USE

This document ensures the Parklet design, installation, and operation:

- 1. aligns with Rail Safety National Law and Yarra Trams Enterprise Risk Management Procedure;
- 2. eliminates SFAIRP unacceptable risk to intending and alighting tram passengers;
- 3. eliminates unacceptable risks to persons using the new public space created by the parklet facility;
- 4. maintains Accessibility requirements in line with Road Safety legislation, DSAPT & DDA standards and guidelines;
- 5. maintains road safety principles, sightlines, and engineering standards & best practices; and
- 6. maintains full access to all tram infrastructure required for first responders attending to tram emergencies, preventative or reactive maintenance, and general operation of the tram network.

#### 4 PARKLET APPLICATION PROCESS

Prior to construction of any Parklet design adjacent to a tram corridor, Yarra Trams requires all applicants to submit their Parklet design and a 'No Go Zone' application, including a risk assessment and Safe Work Method Statement (SWMS), via email to <a href="mailto:dl-trafficengineer@yarratrams.com.au">dl-trafficengineer@yarratrams.com.au</a> for Yarra Trams Engineering review of design endorsement.

If the Parklet is proposed to be installed within a High-Risk Zones (No Go Zones) around tram assets will also require a Permit for Work to be issued. Applications must be submitted to <a href="mailto:permits@yarratrams.com.au">permits@yarratrams.com.au</a> a minimum of 6 weeks prior to the proposed construction start date.

The application must contain the following information:

- 1. Plan view (looking at the proposed site from above), including a google earth view.
- 2. Section view or side elevation of the Parklet, in relation to existing road alignment, tram tracks, tram stop flag, overhead assets and any other tramway assets including pillar boxes, signal boxes, etcetera. The maximum height of the Parklet installation must be shown.
- 3. Engineered designs are desirable but not essential. However, the accuracy of all measurements is critical to the application. The design should show all relevant dimensions including (i) Parklet; (ii) respective offsets to tram tracks; (iii) other key site features and constraints, including tram infrastructure, such as tram poles and other tram assets. Designs must provide sufficient context to show how the design links to adjacent track infrastructure including switches, cross overs and other tramway features, which may increase risk to Parklet patrons.
- 4. All dimensions must be shown clearly on the design and must demonstrate adherence to Yarra Trams requirements as specified in this document.

In relation to the construction of any structure associated with the Parklet, respective construction methodology, and/or use of mobile plant within High-Risk Zones, refer to the following link for more information on how to work safely on or near tram infrastructure:

https://yarratrams.com.au/permits-for-works

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#### 5 PARKLET REQUIREMENTS

In line with Rail Safety National Law and WorkSafe Victoria's <u>Hierarchy of Controls</u>, risk elimination remains the safety objective. If a risk cannot be eliminated, then all safety risks must be managed as required in occupational health and safety legislation, to a level so far as is reasonably practicable (SFAIRP). In this context, Yarra Trams' requirements for positioning of a Parklet is detailed in 5.2.2 Parklet and Design Requirements below.

#### 5.1 Considerations:

- 1. Alighting passengers at a respective kerbside tram stop may have boarded a low floor tram at an upstream DDA compliant level access platform.
- 2. Manual wheelchair egress at a kerbside stop is credible and does occur on the network. However, this activity requires adequate space to safely alight and manoeuvre away from a tram to safety.
- 3. Passengers with assistance animals or prams and accompanying handheld children require adequate space to depart a tram and exit the roadway in tandem.

#### 5.2 Parklet Design and Installation Requirements

#### 5.2.1 Passenger Accessibility and Risk Assessments:

To ensure no new risk is created for intending or alighting tram passengers, where a Parklet is proposed to be installed 20 – 30 metres on approach to a tram flag, the applicant, at their cost, must undertake an independent DSAPT Audit *and* either Safe Systems Assessment or Road Safety Audit, actioning any recommendations arising from those audits and/or assessments. These assessments must be conducted at the final design stage, and after installation to ensure legislative compliance.

The following risk assessments and reports must be completed:

- 1. Yarra Trams requires a Risk Assessment to assess tram operations and infrastructure risk.
- 2. All Parklets proposed to be installed within 30.0 metres of a tram stop flag require Road Safety Audit (RSA) Report.
- 3. Under Rail Safety National Law, Yarra Trams is mandated to manage risk SFAIRP. Yarra Trams may be required to undertake complex SFAIRP analysis with costs passed onto the applicant.
- 4. The RSA shall be undertaken by a qualified road safety auditor certified by DoT (Roads).
- 5. The RSA should:
  - Identify latent road safety risks associated with the subject site and any new road safety risk presented by the design and implementation of the proposed Parklet;
  - Impact on Yarra Trams Operations to be taken into consideration and involve review by a qualified Yarra Trams Road Safety Auditor prior to endorsement;
  - List recommended corrective actions that mitigate risks to stakeholder satisfaction;
  - List responses and treatments implemented by the applicant and/or Road Authority.

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6. The RSA shall be at no cost to Yarra Trams, should be conducted at the final design stage, and validated post-installation to ensure legislative compliance. The RSA shall involve Yarra Trams at each milestone.

#### 5.2.2 Design & Implementation Requirements:

Yarra Trams require a number of standards to be complied with (inclusive of Disability Standards for Accessible Public Transport and the Tram Engineering Standards) in order to provide approval of a Parklet.

The following key criteria must be met for any proposal to install a Parklet adjacent to a tram corridor:

- 1. Applications for Parklets within 20.0 metres of a kerbside tram stop flag will not be considered;
- 2. The Parklet "No Go Zone" is within 300mm of a tram pole (refer to the diagram of Tram Pole "No Go Zone" below). No infrastructure is permitted in that space;
- 3. Parklet structures and associated amenities (e.g., planter boxes and plants) must not impede sightlines of any road user, including but not limited to:
  - o between intending trams passengers and other road users;
  - o tram driver visibility to the tram stop flag and intending passengers;
  - o traffic or tram signals necessary for the safe operation of trams;
  - visibility of errant road users/pedestrians that may appear from behind parklet structures or poles must be addressed;
- 4. Parklets must be fenced off at the road traffic interface to ensure that they do not provide alternative road crossing access points with the associated reduction in driver reaction times due to close proximity to the tram running;
- 5. the perpendicular distance between the back of tram rail and Parklet structural extremity must be an absolute minimum of 1.85 metres. Any part of the Parklet structure, including protruding foundations, must not encroach this absolute minimum (see Inset B). This applies to Parklets adjacent to the Straight (Tangent) track; and
- 6. in close proximity to curves, tram special works, crossovers, and/or track switches, the Parklet design will be considered on a case-by-case basis and may require additional impact attenuation devices to prevent injury from tram derailment risks.

The Applicant and/or Co-ordinating Road Authority or Local Municipality must ensure the design and implementation do not permit vehicle parking to impede tram passenger access. Where applicable, passenger access from trams to the nearest footpath must be no less than 1.5 metres in width. Subject to risk assessments, stand-alone traffic control devices may be required to prevent parked vehicles from impacting accessibility. Where approved, such devices must be maintained 1.5 metres from a Parklet structural extremity (see Inset C).

In accordance with this document Parklets must be designed and constructed no closer than 30 metres from a tram stop flag on the approach side of the stop (see Inset C). At Yarra Trams discretion *and* where safe accessibility requirements can be maintained, *and* no risk of 'drive-by stationary tram' exists, Parklet installation between 20 – 30 metres on the approach to a tram stop may be considered (see Inset D).

Where the public road has 2-lanes in the direction of travel (1 traffic lane including trams and 1 parking lane), Parklets may be considered between 20.0 and 30.0 metres solely at Yarra Trams' discretion.

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Where the public road has 3-lanes in the direction of travel (1 traffic lane, 1 shared traffic/tram lane, and 1 parking lane), Parklets must not be installed within 30.0 metres of a tram stop flag

The Parklet design and installation must:

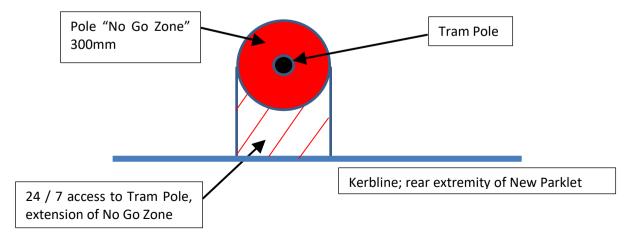
- 1. not exceed two parking bays in length when in proximity to a tram stop;
- 2. remove any residual designated parking bays within the 30-metre offset;
- 3. remove any residual designated parking bays within 20-metres of a tram stop flag on the approach;
- 4. be no closer than 3 metres on the departure side of a tram stop flag;
- 5. include gazetted and signposted Tow Away provisions to enable timely removal of vehicles that pose a road safety or accessibility hazard; and
- 6. ensure sight distances are in accordance with Austroads Guidelines. Parklet installation or operation must not impede:
  - o sightlines between intending tram passengers and other road users;
  - tram driver line-of-sight to tram signage and/or signals required for safe tram operations; or
  - tram driver sightlines to other pedestrians that may be using access points created by parklets.

#### 5.2.3 Crash Protection Devices:

Crash protection devices shall be designed and installed to satisfy independent safety assessments, the Co-ordinating Road Authority, and Yarra Trams. The lateral distance between the tram rail and the crash protection device must comply with the minimum 1.85 metres offset specified in this document.

#### 5.2.4 Tram Pole "No Go Zone" (NGZ) –

 Parklets shall not be installed within 300mm's of a tram pole, in line with Victorian Electrical Supply Industry guidelines. Where possible, Parklets should be designed to provide as much clearance from the tram pole as practicable. For all installations in the vicinity of a tram pole, an assessment by Yarra Trams will take place and may require additional controls such as installation of nonconductive furniture/structures and protective barriers on the pole



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2. Other No Go Zone diagrams:

https://yarratrams.com.au/media/2081/adjacent-to-tram-poles.pdf
https://yarratrams.com.au/media/2080/vicinity-of-tram-tracks.pdf
https://yarratrams.com.au/media/2077/above-and-below-tram-tracks.pdf

- 3. Note: all installations in the proximity of a tram pole or electrical infrastructure must adhere to the Electrical Safety (General) Regulations 2019.
- 4. Access to Yarra Trams assets for maintenance and emergencies shall not be impeded.

#### 5.3 Parklet Construction Requirements

- 1. Construction work must not commence without **approval** by Yarra Trams given pursuant to this document.
- 2. Site specific SWMS covering installation methodology must be submitted to Yarra Trams.
- 3. Construction design must use non-conductive material.
- 4. Construction design must account for easy dismantling.
- 5. Overall Parklet height design not to exceed 1.8 meters inclusive of balustrade from road level.
- 6. No awning or Pergola type construction is permissible on a Parklet.
- 7. No conductive heaters to be used under overhead infrastructure.

#### 6 DISCLAIMER

To the maximum extent permitted by law, Yarra Trams will not be liable for any loss, damage, liability or claim whatsoever suffered or incurred by any person arising directly or indirectly out of:

- 1. the use or reliance on the information contained within this document;
- 2. the use of a Parklet: or
- 3. electrical hazards in connection with the failure to address risks with the design and installation of Parklets in close proximity to tram assets, in accordance with this document.

This document cannot be relied upon in relation to protection against future network development, planned or unplanned works, or legislative requirements. Future modification to or removal of Parklets to accommodate Yarra Trams operational requirements, works, legislative requirements and future developments of the tram network may be required to be implemented by the Parklet owner at their sole cost and expense.

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#### 7 REFERENCES

- 1. Victorian Traction Industry Electrical Safety Rules 2019
- 2. Yarra Trams Electrical Infrastructure Safety Rules V3
- 3. Electrical Safety (General) Regulations 2019
- 4. Safe Systems principles
- 5. Yarra Trams Standard Drawing:
  - o STD\_T9000 Tramway Structure Gauge
- 6. Austroads Guide to Traffic Management Part 3: Geometric Design
- 7. Department of Transport:
  - o Disability Standards for Accessible Public Transport
  - o Traffic Engineering Manual, Volume 3 Accessibility (DDA) Guidelines
  - o Road Design Note 06-04 Accepted Safety Barrier Products
- 8. Road Safety Road Rules National minimum distance passing cyclists (1.0m up to 60 kph), effective 26 April 2021.
- 9. Australian Standard nominal parking bay = 2.4m\* x 5.4m\*\*
- 10. Department of Transport "On-road dining approvals as we progress into a COVID normal" version 1 (October 2020)
- \* This document uses a 2.2m bay width within a 2.8m traffic lane (absolute minimum) as a worst-case scenario.
- \*\* This document has been based on 6.0m parking bays as used by Municipalities on the tram network

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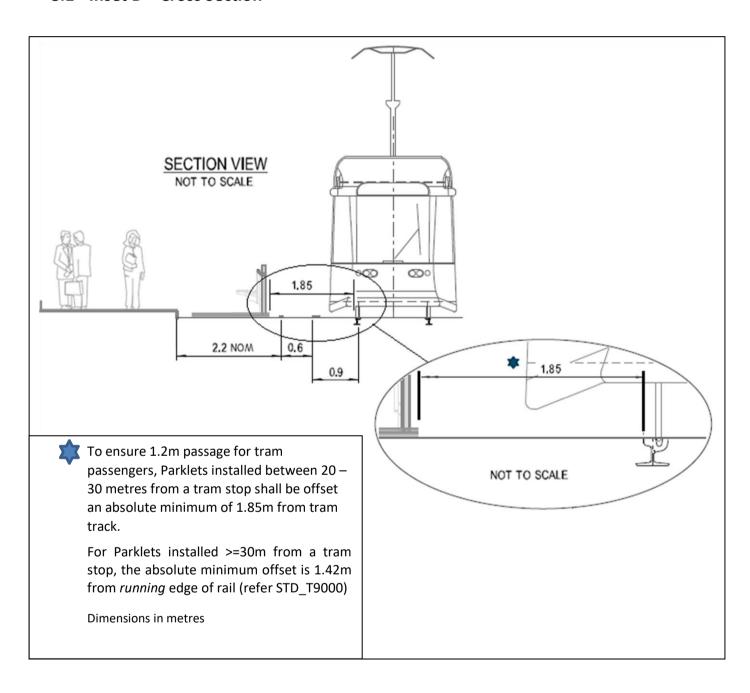
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#### 8 DIAGRAMS

#### 8.1 Inset B - Cross Section



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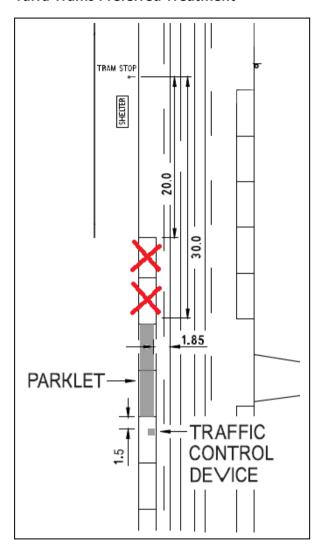
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#### 8.2 Inset C - Plan View

#### **Yarra Trams Preferred Treatment**



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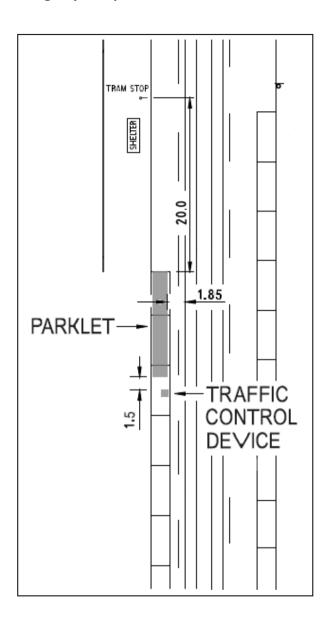
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#### 8.3 Inset D

#### **Design by Exception**



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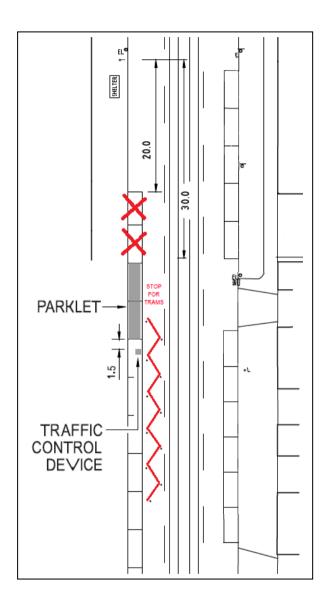
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# 8.4 Inset E Supplementary Design – Additional Traffic Lane



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#### 9 RELATED LEGISLATION AND DOCUMENTS

Name	Document number
Victorian Traction Industry Electrical Safety Rules 2019 (Energy Safe	ISBN: 978-1-925838-07-7
Victoria)	"The Orange Book"
Yarra Trams Electrical Infrastructure Safety Rules V3	IN-004-ST-0002
Tramway Structure Gauge	STD_T9000
Disability Standards for Accessible Public Transport	
Department of Transport (Roads) Traffic Engineering Manual	TEM Volume 3 - Accessibility (DDA) Guidelines
Department of Transport (Roads) Road Design Note	RDN 06-04 - Accepted Safety Barrier Products
Road Safety Road Rules	
Electrical Safety (General) Regulations 2019	Authorised Version No.1
	S.R. No. 113/2019

#### **10 DOCUMENT VERSION CONTROL**

Version History	Date	Detail
1.0	10/05/2021	Original approved issue.
2.01	12/05/2022	Restore back to V1.0
3.0	16/05/2022	Energy Safe Victoria requirements.

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