

Rail Futures Inc

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**PO Box 1257
Carlton Vic 3053
28 February 2019**

**Hon Tim Pallas MP,
Treasurer of Victoria,
Parliament House,
Melbourne Vic 3000**

Rail Futures Submission on the 2019/20 State Budget

Dear Treasurer,

I have pleasure in respectfully submitting for your consideration proposals for the 2019-20 State Budget for rail and tram projects and for some specific service improvements.

Rail Futures strongly supports the Government's commitments to important investments including Melbourne Metro, the Level Crossing Removal Project, rolling stock improvement and the Regional Rail Revival program. We are pleased that these have been accorded priority and are now well into implementation. We also acknowledge that, in some instances resource availability has tightened and some specialist workforce skills are in short supply.

Nonetheless, Melbourne's rapid growth continues to outstrip provision of public transport services, hence there is little evidence of any reduction in car dependency. In our view, this is not sustainable over the longer term.

We are therefore recommending some smaller projects which we believe will be shown to have excellent benefit/cost ratios. There are also some previously approved rail and tram projects which appear to be lagging and deserve higher priority. Rolling stock needs and issues are also in this Submission. We also urge that funding continue to be set aside for planning to finalise the scope, concept design and business cases for some already announced specific large and smaller infrastructure projects so that implementation can commence as soon as resources become available.

As you know, Rail Futures is a non-profit non-partisan organisation, mainly comprising experienced professionals, that supports investment in the public interest in rail-based public transport and intermodal services. We trust this submission will be of assistance in the policy development process in the coming year.

Copies of this Submission are also being forwarded to the Minister for Transport Infrastructure, Minister for Public Transport, Ports and Freight and Minister for Roads.

Yours sincerely,

**John Hearsch
President, Rail Futures Institute**

Rail Futures Institute

State Budget Submission for 2019/20

Overview

Rail Futures Institute (RFI) acknowledges that the Victorian Government is currently undertaking a large portfolio of significant transport projects, including the critically important Melbourne Metro (MM1) and Regional Rail Revival projects and multiple level crossing removal works. It also recognises that, in at least some instances, resource availability has tightened and some specialist rail-related skills are in short supply.

Notwithstanding, Melbourne's population growth and its urban spread continues to outstrip provision of adequate public transport, hence there is little evidence of any reduction in car dependency, particularly for access to employment. Similarly, in Melbourne's inner and middle suburbs residential densification (a most necessary change) is proceeding apace and placing rapidly increasing pressure on the tram network and on some train services. Moreover, the substantial absence of effective cross-suburban public transport, as distinct from radial services to/from the CBD, means that car dependency continues at a high level within the inner and middle ring suburbs.

In recognition of the abovementioned resource constraints, this submission does not propose the early commencement of further very large rail projects pending near completion of MM1 – but with two exceptions:

- the overdue **Melbourne Airport Rail Link via Sunshine** which we are keen to see move toward early implementation with the involvement of the private sector and with Commonwealth financial support; and
- urgently needed **electrification of the Regional Rail Link lines from Southern Cross (platforms 15/16) to Wyndham Vale via Sunshine and Deer Park** so that high capacity Metro services can meet burgeoning demand now threatening to overwhelm the capacity of regional trains on the Geelong corridor. (Note that completion of MM1 is not a pre-requisite for this project).

For the forthcoming budget, this submission recommends:

- urgent investigation and implementation of some **smaller capital projects** which in our view constitute “low hanging fruit” where the benefits considerably outweigh the costs;
- a package of **specific service frequency improvements** for metro and regional trains and the tram network requiring either zero or minimal capital expenditure;
- urgent consideration of **specific rolling stock projects** and related issues;
- placing **higher priority on some previously approved projects** on which progress appears to be lagging; and most importantly -
- funding of **intensive planning to finalise the scope, concept design and business cases** for already announced specific large and smaller infrastructure projects so that implementation can commence as soon as resources become available. We are aware that some of this work is currently proceeding.

Details to support these recommendations are on the following pages.

Proposed planning and implementation of smaller high priority projects

Project Description	Project Rationale	Other Comments
A new Inner East/CBD semi-orbital tram route by linking and combining the present Routes 30 and 78 , only requiring a new curve pair at the corner of Victoria and Church Streets, North Richmond (see attached Diagrams 1 and 2).	This project combines present Tram Route 30 (St Vincents Plaza to Docklands via Latrobe Street) and Route 78 (North Richmond to Balaclava via Church and Chapel Streets) into a single route from Docklands to Balaclava. It will directly connect the job rich areas of Prahran, South Yarra, Cremorne and North Richmond with East Melbourne's medical precinct, CBD including State Library and RMIT precincts, Marvel Stadium and other Docklands precincts. The new route will intersect rail lines at East and North Richmond, Melbourne Central, and Flagstaff stations, plus 20 other tram and 10 major bus routes, providing numerous new point-to-point travel opportunities.	This project is a classical "low hanging fruit" opportunity, providing many benefits. It requires minimal capital outlay and minor additional operating expenditure, partly offset by improved tram utilisation. It will require 2 or 3 additional trams in service, drawn from the present older tram fleet. Yarra Trams would undertake the necessary track work. We suggest that this project can easily be completed and the new through route implemented during the current term of government.
Port Melbourne tram route 109 terminal upgrade comprising a 200 metres twin track extension across Waterfront Place, new twin platform terminus outside of the Station Pier security gate, covered walkway to the Station Pier entrance and a new platform stop in Beacon Cove, north of Beach Street (see attached Diagram 3).	The present single-track terminus layout at Port Melbourne is a constraint on Route 109 service frequency and a regular source of delay as arriving trams cannot access the terminus until the preceding tram has departed and cleared the section of single track. The present terminus location was driven by the former Port Melbourne heavy rail station and is inconvenient and unattractive as the entry point for cruise ship and Tasmanian Ferry passengers, noting that some 120 cruise ships will berth at Port Melbourne during 2019. Local resident access will improve with a new platform stop in Beacon Cove, halfway between the proposed Station Pier and existing Graham stops.	This project has the dual benefits of improving a key tram route's capacity, efficiency and reliability, while providing surge capacity and a much more attractive and welcoming "Gateway to Melbourne" for over 200,000 cruise ship passengers per annum. This work is likely to be undertaken by contract with support from Yarra Trams. We propose that this project be completed during the current term of government.
Caulfield station upgrade – this is expected to comprise a new DDA compliant upper concourse immediately east of the present heritage listed station building with new station and ticket offices, toilets, escalators, ramps and stairs, plus options for direct access to Caulfield Racecourse and Monash University Caulfield campus, and a significantly improved train/tram and bus interchange.	This station will become much more important as a key interchange between the Dandenong and Frankston corridors when MM1 opens. However, it is already significant as an origin and destination location handling around 5 million boardings per annum. The present station subway, ramps and entrances are unattractive and not DDA compliant. Also, Platform 1 is separate from the remainder of the station ticketed area, thus requiring tagging off and on with MYKI when transferring between Platform 1 and other platforms. This work will complement the recently completed major station works on the Dandenong line and committed level crossing removals at nearby Glenhuntly station.	This project was expected to be an integral part of the overall scope of the MM1 project, but this is not the case. Post-MM1, its importance will be equivalent to that of Footscray and Sunshine, both of which have recently been extensively upgraded. We propose that the necessary upgrading take place during the current term of government.

Proposed service improvements

Project Description	Project Rationale	Other Comments
Suburban train improved service frequency – off-peak, evenings to 9pm and weekends, to/from: <ul style="list-style-type: none"> • Watergardens 10 min • Sunbury 20 min • Craigieburn 10 min • Epping 10 min • Macleod 10 min 	“Turn up and go” service frequencies of around 10 minutes on rail trunk routes are critical to public transport competitiveness and reduced car dependency. The proposed changes can be accommodated within existing infrastructure and the rolling stock fleet.	These changes will bring these corridors into line with current 10 min frequency daytime services to Newport, Frankston, Dandenong and Blackburn. Sunbury services presently run every 40 min – this change aligns with outer services to Werribee, Mernda, Pakenham and Cranbourne.
Tram headways set at a maximum of 10 minutes to 9pm daily on key routes: <ul style="list-style-type: none"> • Route 6 - Moreland-Glen Iris • Route 11 – West Preston • Route 12 – Victoria Gardens - St Kilda • Route 19 – North Coburg • Route 48 – North Balwyn • Route 57 – West Maribyrnong • Route 58 – Toorak-West Coburg • Route 59 – Airport West • Route 67 – Carnegie • Route 72 - Camberwell • Route 75 – Vermont South • Route 86 – Bundoora • Route 96 – East Brunswick-St Kilda • Route 109 Port Melbourne-Box Hill 	“Turn up and go” service frequencies of around 10 minutes on the principal tram routes are critical to public transport competitiveness and reduced car dependency. The proposed changes can be accommodated within existing infrastructure and the tram fleet.	Other routes could operate to these frequencies in future.
Melbourne to Echuca return service on weekdays – by extending 0914 Bendigo service to Echuca to arrive at 1238 and originating the 1428 Epsom-Melbourne service from Echuca at 1308.	This complements a Melbourne to Echuca return service provided on Saturdays and Sundays but not on weekdays. Echuca is a major tourist destination and better services are needed for travellers from Melbourne and Bendigo.	No additional rolling stock is required to operate these services. Some rationalisation of existing coach services between Bendigo and Echuca should be possible due to the proposed additional train services.
Melbourne to Maryborough day return service on Saturdays and Sundays – by providing additional services from Ballarat to Maryborough connecting with the existing 0916 service from Southern Cross and on return from Maryborough connecting with the 1813 service from Ballarat to Southern Cross.	Maryborough has good tourist potential. At present, a suitable service is provided on weekdays but not on weekends when it is impossible to make day or weekend return trips. This shortfall needs to be addressed	No additional rolling stock is required to operate these services.

Rolling stock and related projects

Project Description	Project Rationale	Other Comments
Additional new suburban trains , most likely in the form of 15 x 3-car Xtrapolis sets supplied by Alstom at Ballarat	The additional trains are required to support Southern Cross to Wyndham Vale electrification (see above) and can be operated in either 6-car or 9-car consists to meet demand without requiring platform lengthening.	This project will support continued employment in rolling stock trade skills at Ballarat and will not affect the major HCMT project being undertaken by Downer at Newport.
Wyndham Vale train stabling and maintenance facility – Stage 2.	Stage 2 of this facility will be needed to support the Metro electric train fleet that will initially operate between Southern Cross and Wyndham Vale.	Stage 1 of this facility is currently under construction and will be initially used to stable 6 x 6-car VLocity trains. Later expansion will be required when the Werribee to Wyndham Vale link is built.
<p>Altered procurement for V/Line VLocity trains (beyond 88 x 3-car sets to be in service by late 2019). In lieu of obtaining an additional 18 x 3-car sets (54 cars, as announced), we propose procurement of 34 trailer cars (preferably non-powered) to allow creation of 34 x 4-car sets (thus retaining 54 x 3-car sets) and used to operate 7-car consists on peak period Geelong and Ballarat line services.</p> <p>In addition, five x 4-car InterCity standard gauge sets (20 cars) would be procured for Albury line services.</p>	<p>Few, if any, additional peak period train paths are available, hence longer trains, not more trains, are urgently needed to handle patronage growth on the Geelong and Ballarat lines. Therefore, it is proposed to acquire 34 trailer cars for insertion into 34 existing 3-car sets, thus enabling operation of 7-car consists on peak period Geelong and Ballarat line services. In conjunction with achievable improved fleet utilisation, this would increase seat capacity (compared with December 2018) by 34% over both corridors.</p> <p>Five x 4-car Inter City sets with buffet facilitates and additional luggage space would also be acquired for standard gauge Albury services replacing existing loco-hauled trains.</p>	Additional VLocity train sets (beyond 88 x 3-car sets) in their current configuration entail a high risk of not being productively utilised and could become surplus in coming years due to extension of metropolitan electrification to Wyndham Vale, Melton and Wallan; and the potential introduction of bi-modal or electric trains for the Geelong Fast Line. Existing 3-car sets are unsuitable for adaptation to replace loco-hauled trains on long distance services due to inadequate capacity.
Minor platform extensions for 7-car VLocity operation required at four Geelong line and seven Ballarat line stations. (All recent and current works are suitable for 7-car consists)	These minor works, in association with 7-car VLocity operation on the Geelong and Ballarat lines and improved fleet utilisation will increase seat capacity on both corridors by 34%.	7-car consists were operated previously on the Geelong line until 2015, when all VLocity sets were standardized to 3-car sets, locking in operable train sizes of only 3 or 6-cars.
Ballarat West train stabling and maintenance facility – needed in addition to Waurm Ponds facility to meet stabling and maintenance requirements - located approximately 2km west of Wendouree station on the Ararat line. .	The V/Line regional train fleet has been steadily augmented over the past several years to meet increased demand, but no expansion of supporting train maintenance facilities has occurred since 2012. There is anecdotal evidence of an increasing maintenance backlog of the V/Line fleet. The additional stabling will replace the stabling sidings at Ballarat station, thus creating potential for re-use of the heritage building currently used for this purpose. The future maintenance workload will also require a similar major facility proposed for Waurm Ponds (see below).	The proposed site at Ballarat West is understood to be on existing Crown land being transferred to VicTrack.

Rolling stock and related projects (continued)

Project Description	Project Rationale	Other comments
Additional E class trams. It is proposed that a further order be placed for 100 additional E class trams for delivery at 20 per annum over the next 5 years.	The Melbourne tram fleet includes 183 non-airconditioned high floor trams, many of which are around 40 years old and well overdue for replacement. These are low capacity trams which are struggling to cope with current passenger loading. Currently, 313 trams have high floors and are therefore inaccessible to the disabled community. Transition to a larger fleet of articulated, high capacity, low floor trams will provide significant additional capacity to support inner and middle suburbs rapid residential densification, provide improved asset utilisation of tram infrastructure, and contribute towards meeting DDA fleet compliance by 2032.	Under DDA legislation, the State is obligated to have a DDA-compliant tram fleet by 2032. Given anticipated patronage growth, this will require procurement of around 350 new trams over 14 years – an average of 25 per year or double the present delivery rate. This would offset any need for life extension works on 40-year old Z class trams. A larger order for delivery over an extended period will provide job security for the Dandenong workforce and incentivise more efficient production processes.
New Tram Depot in Footscray Road, West Melbourne. Includes an approximate 350 metres connection to existing tram tracks in Footscray Road.	Current depot stabling capacity for the Melbourne tram fleet is close to fully utilised. New, longer high capacity trams require more than double the depot track length of old trams which they will replace.	The proposed site for a new depot is on VicTrack land immediately west of CityLink in Footscray Road, West Melbourne.

Previously approved lagging high priority projects

Project Description	Project Rationale	Other Comments
Waurm Ponds Train Stabling and Maintenance facility – a major new facility for stabling and maintenance of V/Line VLocity trains, located approximately 2km west of Waurm Ponds station.	The V/Line regional train fleet has been steadily augmented over the past several years to meet increased demand, but no expansion of its train maintenance facilities has occurred since 2012. There is anecdotal evidence of an increasing maintenance backlog of the V/Line fleet. The proposed facility will create around 30 skilled full-time jobs. The additional stabling will replace the stabling sidings at Geelong station, thus creating potential for redevelopment of this and adjoining valuable land. The stabling relocation will also reduce train operating costs, eliminate congestion in the Waurm Ponds area and improve overall Geelong line service reliability. The future maintenance workload will also require a second new major facility - proposed for Ballarat West (see above).	This project was originally announced and funded in mid-2015 but work is yet to commence. The project requires land acquisition and the delay is attributed to a dispute with the landowner concerned. The delay is now having system-wide ramifications. The delay and some scope changes, including capacity to maintain 4-car consists, will require additional funding.
Bendigo-Echuca line track upgrade comprising track standard improvement to initially increase permitted speed for VLocity railcars initially from 80km/h to 100km/h (Class 3 track) and later to 130km/h (Class 2 track).	Present trip times from Echuca are uncompetitive with car travel. With modest track improvement to Class 3 standard, 15 minutes trip time saving should be achievable. Further upgrade to Class 2 standard requires rail replacement which can be undertaken when resources permit.	This work forms part of the funded Bendigo-Echuca line upgrade, including major signalling work in the Bendigo area. The specified track upgrade can be undertaken independently of the signalling project.
New crossing loop at Boorcan (Warrnambool line) comprising provision of a new remotely controlled crossing loop between Camperdown and Terang to replace very old and inefficient train passing facilities at Camperdown.	Signalling and shunting staff are provided at Camperdown on a daily basis to operate the train crossing facilities. The costs involved will no longer be incurred once the Boorcan loop is operational. Importantly, trip time savings for Warrnambool passenger trains of around 15 minutes will then be achievable. A similar remote-controlled crossing loop was installed at Warncoort (near Colac) 4 years ago and the second loop at Boorcan is required to operate freight and passenger services efficiently and allow implementation of RNDP increased frequencies.	This is a sub-project of the more extensive overall Warrnambool line upgrade announced and funded some time ago. The crossing loop works should be undertaken in advance of the major signalling and other works included in the main project.
Park Street, South Melbourne tram “missing link” comprising approximately 300 metres of tram line construction in Park Street between Kings Way and Heather Street, and an additional curve pair at the corner of Park and Clarendon Streets, South Melbourne.	This is a small but important project that will allow re-routing of one or more St Kilda Road/Swanston Street north-south tram routes to instead serve the western CBD in Spencer Street and the Docklands precinct. Swanston Street presently has 8 tram routes whereas William Street has one and there are no tram routes that traverse the full length of Spencer Street between Flinders and Latrobe Streets.	This project is an integral part of MM1 and had been deferred until the major works around the new Anzac station are completed. We maintain that the benefits are such as to override the inconvenience of having additional work occurring in the area. Yarra Trams would undertake this work.

Planning for High Priority Large and Medium Projects

We propose that funding be provided in 2019/20 to undertake, continue and/or complete planning, scoping, concept design and business cases for the following critically important projects:

Project Description	Project Rationale	Other Comments
Upfield line diversion comprising Gowrie-Upfield duplication, reopening, duplication and electrification Upfield to Roxburgh Park, VISY re-worked entry road, grade separated rail/rail junction at Roxburgh Park, quadruplication Roxburgh Park to Craigieburn and two additional platforms at Craigieburn.	Provides capacity to meet pent-up demand on the Craigieburn and Upfield lines and provide sufficient train paths for increased regional services from Wallan, Seymour and Shepparton pending electrification between Craigieburn and Wallan.	It is critical for this project to be in place prior to, or at least concurrent with MM1 opening in 2024/25 so that pent-up demand for both metro and regional additional services from the northern suburbs and north-eastern Victoria can be met from the outset.
City Underground Loop re-configuration comprising connection of the Northern and Caulfield city underground loops requiring new links from Richmond to the Northern Loop near Jolimont and West (present North) Melbourne to the Caulfield Loop near Southern Cross. Also includes a rail/rail flyover near South Yarra and new Platform 7 at West Melbourne to provide cross-platform interchange.	This is a uniquely cost-effective project which releases a pair of viaduct tracks between Flinders Street and Southern Cross and thereby allow for the potential operation of 20 additional trains per hour (over and above MM1 gains) in each direction through the CBD inner core of the metropolitan rail network.	Practical timing of this project is restricted to implementation immediately post-MM1, prior to returning all Frankston line trains to the Caulfield Loop. Lead time would require early works to commence in 2022. This timing also facilitates overdue and unavoidable renewal of very old superstructure on the four tracks of the original Flinders Street to Southern Cross viaduct.
Deer Park to Melton electrification comprising electrification infrastructure, quadruplication from Deer Park to Melton, removal of (at least) six level crossings, new station at Mount Atkinson (Hopkins Road), rebuild of Melton station, additional train stabling at Calder Park and a new train stabling facility near Melton.	Essential to meet pent-up and ongoing burgeoning demand due to rapid residential development and to ensure physical and operational separation of Metro and V/Line regional trains on the Ballarat line corridor so that regional trains can be accelerated rather than slowed by stopping Metro trains.	Requires completion of MM1 for full service implementation, hence this project should be programmed for parallel opening with MM1 in 2024/25. Earlier opening with limited service would also be feasible once Wyndham Vale electrification is completed.
South Geelong to Waurin Ponds track duplication comprising construction of second track, elimination of (at least) two level crossings, Barwon River bridgeworks, new signalling and second platforms at South Geelong and Marshall.	Essential to address persistent reliability problems on the Geelong corridor, eliminate inefficient and costly empty train movements and provide capacity for additional services to Waurin Ponds and the Warrnambool line.	Assumes prior completion of complementary project for upgraded signalling, a second platform at Waurin Ponds and for parallel completion of a new train stabling and maintenance facility at Waurin Ponds (see previous item).

Diagram 1: Existing Tram Routes 30 and 78 operating as standalone routes.

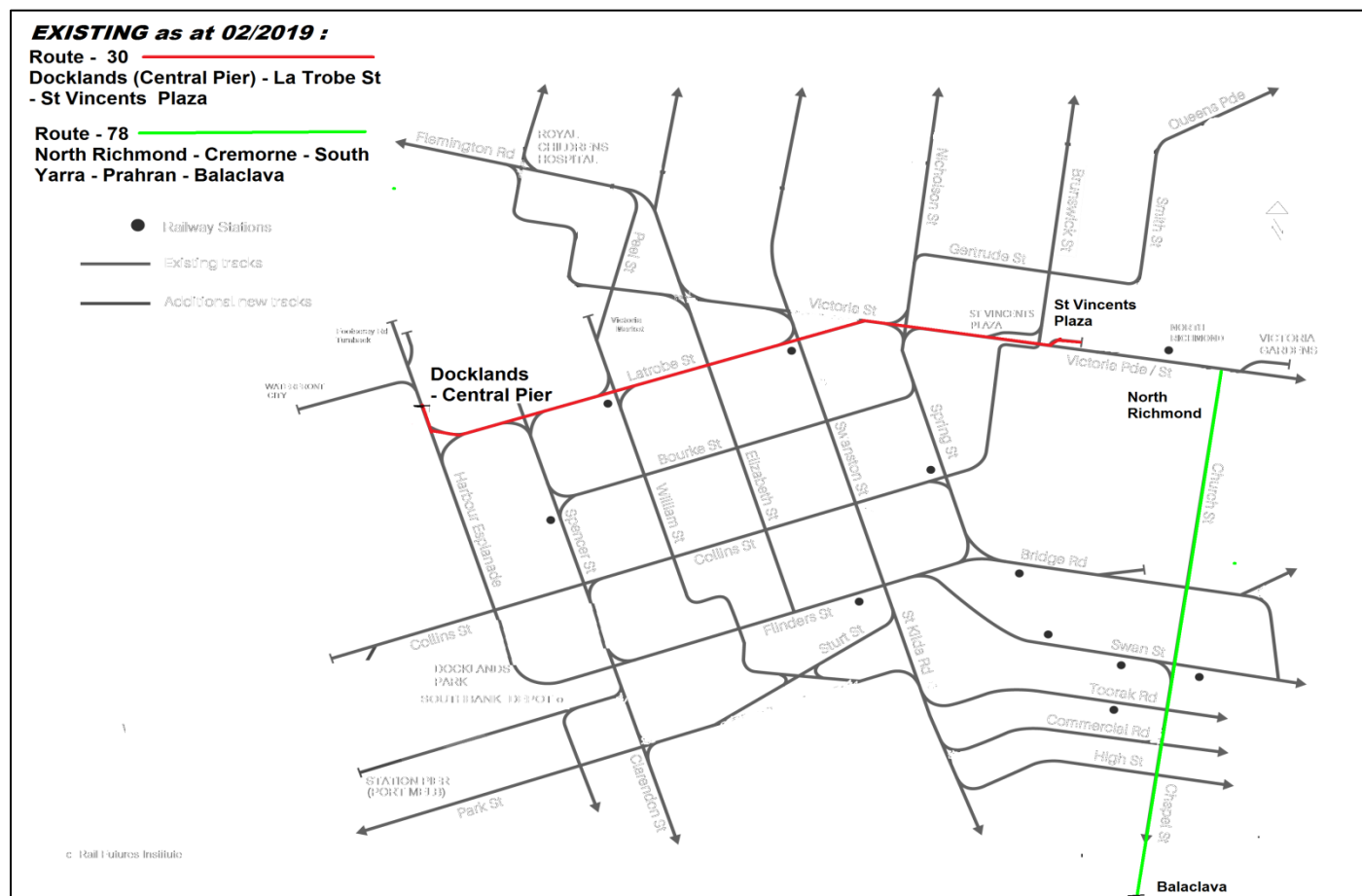


Diagram 2: Combined as NEW Super Route 78

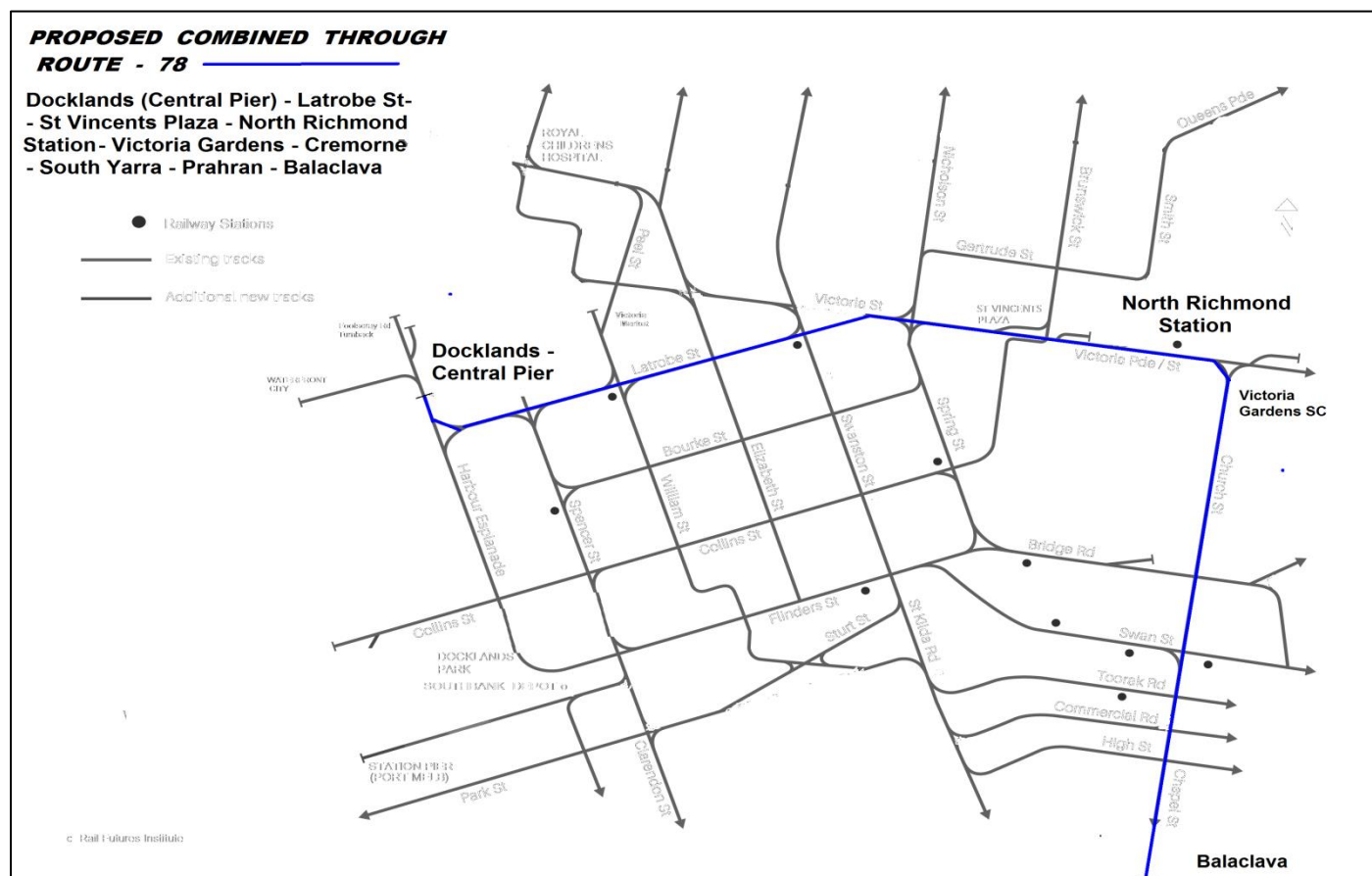


Diagram 3: Concept design for twin track terminus extension at Port Melbourne.

