Attachment A

The following response is provided in accordance with Recommendation 2(a) of the Ministerial Advisory Committee (MAC) report provided to you on 30 May 2016:

1. a more detailed design layout generally according with MAC Option 5a as per MAC Recommendation 2 (a), along with justifications for any proposed changes (Section 2.2 and Section 2.3)

A more detailed Option 5a was designed that aligned with the general intent of the MAC. Option 5a intersections were modelled to understand if the designs would provide benefits to buses. The results showed the peak hour queue generally exceeded the bus lane length. This means bus services will not be able to bypass the long queue and use the bus lane. Based on these findings, a VicRoads Option 5b was created which included longer bus lanes on the approach to an intersection. The bus lane length was based on guidance outlined in Austroads Guide to Road Design Part 4.

2. advice about the variations between the MAC Option 5a and VicRoads Option 5b regarding:

a) deletion of the PAO affecting the Alexandra Avenue intersection (Section 0)

Traffic modelling was undertaken to understand the performance of Alexandra Avenue intersection in terms of Level of Service (LOS). LOS is measured from A (best) to F (worst) and categorises the delay that road users experience.

Traffic modelling results showed that:

- The intersection currently performs to LOS F in the critical morning peak hour;
- With Swan Street/Punt Road intersection ugraded by the end of 2018, as part of the Streamlining Hoddle Street project, and Alexandra Avenue intersection unchanged, Alexandra Avenue intersection performs to LOS F by 2031; and
- With both Swan Street intersection and Alexandra Avenue intersection upgraded with two traffic lanes clear of turn lanes in each direction maintained along Punt Road, Alexandra Avenue intersection improves to LOS C (typically LOS D or better is considered adequate); and
- With three traffic lanes per direction along Punt Road at the major intersections, Alexandra Avenue intersection performs to LOS F.

These results show the PAO should be retained in vicinity of Alexandra Avenue intersection to allow for additional lanes to allow for this intersection to be upgraded and reconfigured to achieve a higher LOS.

b) retaining part of the PAO affecting Domain Road (Section 0)

The MAC Option 5a maintained the PAO near Domain Road intersection to widen the lanes and footpaths at the intersection. While the proposed intersection would not increase traffic capacity significantly, the existing design is sub-standard with lane widths and footpath widths less than minimum standards.

The design increases lane and footpath widths. As a result the intersection and general area is expected to be safer and more desirable to pedestrians improving urban amenity.

VicRoads Option 5b maintains the PAO and MAC Option 5a design in vicinity of Domain Road intersection.

c) no allowance for tram "superstops" at Toorak Road, Commercial Road or High Street intersections (Section 5.4.2)

Maintaining or removing the PAO is not expected to impact the implementation of future DDA compliant tram stops.

d) arrangements for buses (Section 5.2.1)

MAC's Option 5a improves bus performance in comparison to the existing situation especially for northbound bus movements during the morning peak hour. Whilst there are benefits to be achieved from the MAC's Option 5a and even VicRoads Option 5b which contain longer bus lanes, these benefits are short-lived and not sustainable. In these options, bus performance may ultimately suffer due to future traffic growth or as a result of additional traffic being attracted to the corridor due to external project impacts.

Modelled results to 2031 indicate that Option 7b is the best performing option for buses, performing 6% better than Option 5b and 22% better than Option 5a. With increased traffic the gap between Option 7b and 5b is as high as 33%.

3.advice about the forecast traffic flows north and south of the Yarra River resulting from the recently funded Streamlining Hoddle Street initiative (Section 4.1 and Section 0)

Preliminary traffic modelling shows the reference case design at Swan Street intersection improves the northbound throughput capacity by about 50% during the critical morning peak hour.

With Punt Road remaining as two through lanes per direction (as per the MAC Option 5a, VicRoads Option 5b and Option 7b) along the corridor, the queues from Swan Street intersection do not extend back to Alexandra Avenue.

With Punt Road widened to three through lanes per direction (as per Option 7a) along the corridor, the queues from Swan Street intersection do extend back to Alexandra Avenue creating issues at Alexandra Avenue intersection and along the Punt Road corridor. When Punt Road increases capacity and vehicle throughput, additional demand is attracted to the corridor. The Swan Street intersection improvements cannot handle the increased demand.

Detailed reports and analysis are provided in Attachment B and Attachment C.