Appendix:1: Phase 2 Studies – an encouraging list, but still incomplete:

We appreciate that VDOT is proposing several additional feasibility studies in Phase 2 that are critical to the success of the project and to the creation a truly safe environment for all travelers. We also appreciate that VDOT has incorporated many stakeholder and public feedback suggestions into their Phase 2 study proposals.

We hope to see positive results from these proposed Phase 2 studies:

- Study the feasibility of providing a pedestrian and cyclist underpass or overpass at 18th street: Ensure that the structure is designed to support pedestrians, cyclists, micromobiles riders, and those with disabilities. Details on timing, funding and effectiveness should be shared. (See Appendix 2 for one idea)
- Identify potential interim improvements to the current intersection of Route 1 and 23rd St. South that could be implemented ahead of Arlington County's 23rd Street Improvements. We appreciate VDOT's proposed feasibility study for interim solutions for this dangerous intersection.
- Develop a comprehensive TDM strategy: This needs to be DMV region-wide, not just in Virginia. To the extent that VDOT plans to rely on TDM programs to increase safety, details on the scope, strategy, timeline, funding, and effectiveness of the programs need to be provided. As the region would benefit from an effective TDM program regardless of the ultimate decision on Route 1, it should be implemented as soon as possible and its success evaluated before Route 1 is brought down to grade.
- Mitigate future congestion and potential diversion of traffic onto local and regional roads and identify the traffic levels needed to keep diversion onto neighborhood streets at no more than 5% above baseline levels. The report shows significant diversion of traffic to neighborhood streets with an at-grade option, creating conflict and danger to everyone. This increased local traffic must be prevented, and the analysis should show how this can be done successfully.
- Expand the analysis of Option 3: This analysis should also include the impact of no left turns at 18th on local traffic and bike-ped-transit safety.
- Update multimodal counts analyses: Include new traffic projections and transit/pedestrian/bike counts and projections and compare to the traffic study projections for the Pentagon City Planning Study.

We recommend including these additional studies in Phase 2:

- Hold a community meeting early in Phase 2 to update us on your Phase 2 plans and to hear our concerns about the project and offer suggestions.
- Analyze whether a truly safe at-grade intersection, per Schneider article* recommendations, could be implemented at an at-grade 18th Street. These recommendations are for a speed limit no more than 25mph, reducing design capacity to no more than 25,000 vpd (vehicles per day), and no more than 4 lanes wide. We are glad to see that VDOT will perform an engineering speed study to consider a 25-mph speed limit during Phase 2. We also recommend studying further vdp and lane reduction, per the Schneider study results:
  - The TDM study should include the feasibility of bringing the vpd down to 25,000 vpd
  - Also study the feasibility of limiting the number of total lanes to four.
- Add more innovative intersection treatments, such as a Barnes Dance and Protected Intersection at an at-grade 18th: Determine if their implementation is feasible and the impact on pedestrian and cyclist safety and traffic throughput.

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- Pedestrian zone: Analyze how much space and what types of space non-drivers will need to travel safely along Route 1, as well as calculate the dimensions and characteristics for a landscaping zone that will support healthy trees. Use relevant guidelines to promulgate appropriate minimum dimensions for each separate zone (clear zone, landscaping zone, bike facility, café zone/shy zone) that support the analysis.
- Consider extending the design features for pedestrians and cyclists further south. A short segment of pedestrian friendly features that abruptly ends at the current project boundary is unlikely to create the benefits desired.
- Evaluate proposed changes to transit – bus shelters, bus routes, and an expanded multimodal center at the Crystal City Metro station. Analyses should include the impact on transit rider safety and convenience, the costs for these changes, the impact of traffic congestion with at-grade intersections on transit reliability and transit riders' willingness to use it, and the timelines for implementing these changes.
- Engage with the Arlington County Police Department to identify an enforcement strategy, and resources necessary, for Route 1.
- Evaluate the impact of an at-grade Route 1 intersection at 18th on the response time for emergency vehicles responding to emergencies in Crystal City: How can these vehicles cross Route 1 quickly and safely; what are the implications of any delays; and how would the delays be mitigated? Engage with the Arlington County Fire Department to seek their input on these changes.
- Consider how South Glebe (SR 120) contributes to Route 1 traffic. Identify interventions (spot and comprehensive) that would address the traffic turning from South Glebe onto Route 1.
- Identify traffic controls to warn of and implement the posted speed limits (current and proposed) at locations to achieve compliance. This might result in speed limit change points being shifted to the north on SR 110 and the I-395 offramp.

And most important, expand the scope of the study to include a holistic study of all of Route 1 (from I-395 to Four Mile Run), as well as an analysis of the full range of potential alternative designs. Perhaps the proposed VDOT NEPA requirements will be a venue for this expansion. This is a once in a generation opportunity to get it right.

*Schneider, R. J., Sanders, R., Proulx, F., & Moayyed, H. (2021). United States fatal pedestrian crash hot spot locations and characteristics. *Journal of Transport and Land Use*, *14*(1), 1–23. https://doi.org/10.5198/jtlu.2021.1825

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