## Appendix O

## I-264 Corridor Evaluation Study Design Notes

VDOT's Road Design Manual Appendix A (Issued January 2005) was the principal document used in the development of alternatives in the I-264 Corridor Evaluation process; AASHTO "Green Book" – A Policy on Geometric Design of Highways and Streets (2011 Edition) was also used as a reference. Several of the geometric design standards found in Appendix A were used in the development of the alternatives, including, but not limited to: GS-5, GS-R, and GS-6. Some of the major design elements used in the design of the interstate and interchanges include: design speed – 70 MPH, lane width – 12', left shoulder paved width – 12', right shoulder paved width – 12', and minimum ramp width – 16' (30 mph and greater) and 18' (less than 30 mph).

It should be noted that this analysis has been conducted as a planning level study. Design of the alternatives was only developed to a sketch level of detail and was not based on field survey data. Design was conducted in plan view considering only horizontal design elements. Vertical design elements were considered at a conceptual level to identify potential fatal flaws. It should be understood that more detailed design of I-264 and its interchanges will be required to advance any of the alternatives developed in this study (i.e. Interchange Modification Reports and an environmental document process). These project development processes may result in modifications to the preferred improvement alternatives shown in this report.

Posted ramp speeds in a few of the alternatives (i.e. Military Highway interchange) display different speeds than the existing conditions even when the ramp maintains the same or nearly identical alignment. Ramp speeds in the alternatives were derived from the horizontal geometry of the ramp. It appears that some of the existing posted ramp speeds along I-264 may be less than that indicated by the design and the reasoning for posting below what the design can support is unknown. Existing ramps that can support higher posted ramp speeds are noted in the Electronic Technical Appendix – Appendix A – Existing Conditions Geometry.