

## APPENDIX I

### SECTION I-1- INTRODUCTION

#### INTRODUCTION

Traffic Barriers discussed in this appendix include w-beam guardrail, cable, and concrete median barrier and their associated terminals, do not prevent collisions or injuries from occurring and should only be used where the result of striking a fixed object hazard or leaving the roadway would be more severe than the consequence of striking the barrier. The roadway should be examined to determine the feasibility of adjusting site features so that the barrier will not be required (e.g. flattening a fill slope, removing a hazardous object such as a drainage headwall, etc.). The initial cost to eliminate the need for a barrier may appear excessive; however, the fact that a barrier installation will require maintenance costs for many years should not be overlooked.

When guardrail is wholly or partially within the project limits for any construction project, including heavy maintenance and RRR projects, the engineer shall perform a guardrail assessment on all existing guardrail systems and components including terminals. Refer to Traffic Engineering Division IIM-TE-366 for upgrade warrants. If warranted by IIM-TE-366, the existing guardrail shall be upgraded to the latest standard in accordance with the current VDOT Road and Bridge Standards for the following situations: \*

1. **When located within the project limits of a construction project.** When the line of rail extends outside the project limits with more than 60% of the existing substandard line of rail within the project limits, then the entire run shall be replaced including terminals and upgraded to meet the current Standards. If less than 60% is within the project limits, then only the rail within the project limits is to be upgraded. Consideration should be given to upgrading the entire line of rail even when less than 60% is within the project limits.
2. **When located within the project limits of transportation improvements associated with permitted land development projects.**
3. **When any road is accepted into the state roadway system, all guardrail must comply with current Standards and must include NCHRP 350 or MASH (Manual for Assessing Safety Hardware) approved terminals and rail systems. (For VDOT approved Developer Construction Plans, the Secondary Street Acceptance Requirements (SSAR) govern.)**

For definitions of RRR utilizing Federal Funding on National Highway System (NHS) Roadways, see VDOT's Road Design Manual, [Appendix A, Section A-4](#) Guidelines for RRR Projects.

---

\* Rev. 1/18