

## **FDM 211 Updates**

### **Brief summary and description of changes**

*A number of changes were made to FDM 211 Limited Access as part of the Turnpike Design Handbook Migration, but only four changes are expected to result in potential cost increases. FDM 211 contains the criteria for design of limited access facilities and was, therefore, one of the chapters most affected by the migration of the TDH. Many of these changes either provided more flexibility for LA facility design or captured best-practices developed by the FTE. The changes described in this brief, however, could result in cost increases on some projects. They are as follows:*

- 1. FDM 211.4.3: Deleted “consider” for flush inside shoulder pavement. Flush inside shoulder pavement is now required, rather than just “considered,” where there is an inside median wall and the shoulder slopes toward the travel lane. The shoulder pavement in these areas is typically 12 feet wide or more.*
- 2. FDM 211.9.1: Added minimum vertical profile grade requirements for new construction or when the profile is significantly modified. This is a new minimum requirement and could result in a cost increase on some projects where the minimum would not normally be achieved; however, the cost increase would be offset by reducing or eliminating the need for shoulder rocking and right of way impacts.*
- 3. FDM 211.13: Added language preferring parallel ramp type, added approval requirements for taper ramp types. Existing tapered ramps that are not being altered by construction may remain in place.*
- 4. FDM 211.16: Added access requirements for continuous lengths of guardrail or barrier wall. This is a new maximum length of rigid and semi-rigid longitudinal barriers to meet the needs of maintenance and operations.*

### **Are changes in line with promoting and making meaningful progress on improving safety, enhancing mobility, inspiring innovation, and fostering talent; explain how?**

*All the changes are in line with improving safety. Item 1 prevents the accumulation of debris and water at the edge of the travel lane, where the shoulder is uphill from the travel lane. Item 2 ensures adequate drainage. Item 3 requires use of a ramp type with better operational and safety characteristics. Item 4 allows for access to roadside features for safety, efficiency and maintenance.*

### **What financial impact does the change have? Project costs, pay item structure and consultant fees.**

*There may be a slight increase in consultant fees and project costs for any of these proposed changes, however, these changes are modifications to processes that are already required and being included on projects, so the changes should be relatively minimal.*

### **What impacts does the change have on production or construction schedules?**

*There may be an increase in production time required on Limited Access projects where R/W is highly constrained.*

### **How does this change improve efficiency or quality?**

*The change should increase efficiency by reducing redundant processes, maintenance issues, or swapping a simpler solution for a more complex solution (such as when requiring minimum profile grades to reduce the need for shoulder rocking).*

**Which offices does the change impact?**

*The Offices of Design, Construction, Program Management, Traffic Operations and Maintenance.*

**What is the impact to the Districts with this change?**

*Provides the Districts and Consultants with design criteria to support concepts they have already been implementing on projects based on best practices and training classes. The FTE has expressed a need for these edits to help manage the criteria used on Design-Build projects, which constitute a proportionally higher percentage of their projects.*

**Have District counterpart's comments been addressed?**

*Yes. This change has been communicated to all the District counterparts through the established procedures.*

**Does the change shift risk and to who?**

*These changes do not shift risk.*

**What is the communication plan and schedule for implementation?**

*The Criteria Section of the Roadway Design Office has conducted its annual review and updates to the FDM. Internal reviews have been conducted with the C-Team, Roadway Design Office, Traffic Engineering and Operations, District Design Engineers, District Consultant Project Management Engineers, and the District Roadway Design Engineers.*

*The following is the schedule for implementation:*

- *The 2023 FDM will be published on or before November 1, 2022*
- *Training webinars will be conducted on larger revisions prior to December 20, 2022*
- *The 2023 FDM will be effective for all projects beginning design in January 2023*