- 1. Design speed
- 2. Lane width
- 3. Shoulder width
- 4. Structural capacity
- 5. Horizontal alignment
- 6. Vertical alignment
- 7. Stopping sight distance
- 8. Grade
- 9. Cross-slope
- 10. Superelevation
- 11. Horizontal clearance (except clear zone)
- 12. Vertical clearance
- 13. Bridge width

Guardrail and bridge rail are to be designed according to the latest CDOT M&S Standard Plans, Standard Specifications for Road and Bridge Construction and AASHTO Roadside Design Guide on all new construction and reconstruction projects. For 3R and surfacing type projects, guardrail is to be handled in accordance with Section 2.07.

FHWA may approve design exceptions on federal aid projects for experimental features or where conditions warrant an exception.

Determination to approve a project design that does not conform to the minimum criteria is to be made only after due consideration is given to project conditions and safety benefits for the dollar invested, compatibility with adjacent sections of roadway, and the probable time before the roadway section will be reconstructed due to increased traffic demands or changed conditions.

On local agency projects the involved entities and consultants should discuss the variance request with the Resident Engineer to determine the feasibility of approval and the possibility of project delays. Local agency projects may not have historical accident data and roadway safety inventories. However, accident records may be available from the Safety and Traffic Engineering Branch.

FHWA should be invited to the Field Inspection Review meeting on National Highway System projects and federal-oversight projects when there is a potential variance.

All variances should be identified by the Field Inspection Review and approved prior to the Final Office Review. Early submittal of variance requests will allow time to incorporate comments and concerns, and to collect any additional supporting data and analysis. Untimely submittal for approval of design variances can result in costly delays to the project.

When the design criteria are properly discussed on Form 464, the minimum FHWA requirements for preparing the variance request are satisfied. Additional comments can be added to clarify items. No separate variance transmittal letter is necessary when Form 464 is used.