Adopted Standards for Design

- 23 CFR 625 adopts the following geometric design standards for projects on the NHS:
  - AASHTO Green Book (2011)
  - AASHTO Interstate Standards (2005)
- 23 CFR 625.3(f) allows for approval of design exceptions when standards are not met
Controlling Criteria Revisions

- Proposed revisions to the list of controlling criteria that were adopted in 1985
- Published Notice for comment in the Federal Register on October 7
- Notice also clarifies expectations for design exception documentation
- Comment period ended December 7
- Final Notice published May 5, 2016
Revisions based on:

- NCHRP Report 783: Evaluation of the 13 Controlling Criteria for Geometric Design
- Examined safety and operational impact of controlling criteria
- Some have more direct impact than others
- Context matters: high- vs low-speed
- Consistent with PBPD
Revised Controlling Criteria

- Design speed
- Lane width
- Shoulder width
- Bridge width
- Horizontal alignment curve radius
- Superelevation Rate
- Vertical alignment
- Maximum Grade
- Stopping sight distance
- Cross slope
- Vertical clearance
- Horizontal clearance
- Design Loading
- Structural capacity
Application of Controlling Criteria

All NHS Roadways:
- Design Speed
- Design Loading Structural Capacity

Interstate highways, other freeways, and roadways with design speed ≥ 50 mph (NHS):
- Lane Width
- Shoulder Width
- Horizontal Curve Radius
- Superelevation Rate
- Maximum Grade
- Stopping Sight Distance
- Cross Slope
- Vertical Clearance
Documenting Design Decisions

- All criteria in design standards are important design considerations
- Criteria don’t all affect safety and operations to the same degree
- FHWA encourages agencies to document all design decisions
Design Exception Documentation

- 23 CFR 625.3(f) allows for approval of design exceptions on a project basis.
- Exceptions are required for projects on the NHS when the controlling criteria are not met.
- If STA has assumed the responsibility through a Stewardship and Oversight agreement, they act on behalf of FHWA.
Design Exception Documentation should include:

- Specific design criteria not met
- Existing roadway characteristics
- Alternatives considered
- Comparison of safety and operational performance, along with other factors
- Proposed mitigation measures
- Compatibility with adjacent sections
- Additional requirements for design speed and design loading structural capacity exceptions.
Design Exception approvals

- NHS controlling criteria: FHWA or STA under RBSO
- NHS non-controlling criteria: STA*
- Non-NHS criteria: STA*

*Document in accordance with State laws, regulations, directives, and safety standards. States can determine their own level of documentation depending on their State laws and risk management practices.
Comments Received

- Over 2300 comments received
- Common themes:
  - Notice confused with rulemaking
  - Nearly unanimous support for CC changes
  - Use target speed instead of design speed
  - FHWA asked to encourage State DOTs to adopt similar flexibilities
  - Some state DOTs oppose requirements for design documentation & suggested such is inconsistent with PBPD
- No major changes to proposal were made
Final Notice

- Published May 5, 2016 (81 FR 27187)
- Became effective immediately
- Guidance memo sent to FHWA field offices & website updated
- External webinar on May 16, 2016