



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

ROADWAY DESIGN DIVISION
SUITE 1300 JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-3848
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JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
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INSTRUCTIONAL BULLETIN NO. 13-23

Regarding Design Exception Justification Form

PURPOSE: This Instructional Bulletin updates the Design Exception Justification Form to reflect the changes in the Roadway Design Division organization.

Effective Immediately: Section 3-110.02 and Figure 3-1 are revised as attached.

A handwritten signature in cursive script that reads "Carolyn Stonecipher".

Carolyn Stonecipher, PE
Civil Engineering Director
Roadway Design Division

9/12/13
CS:AH:MC

3-110.02 DESIGN EXCEPTION REQUESTS

Despite the range of flexibility that exists with respect to the controlling elements of design, there are situations in which the accepted criteria are not applicable to the project circumstances or could not reasonably be met. For such instances, when it is appropriate, the design exception process allows for the use of criteria other than the accepted values.

The design exception process requires formal approval for exceptions relating to the following 13 controlling criteria: (1) design speed, (2) lane width, (3) shoulder width, (4) bridge width, (5) structural capacity, (6) horizontal alignment, (7) vertical alignment, (8) grades, (9) stopping sight distance, (10) cross slopes, (11) superelevation, (12) vertical clearance, and (13) horizontal clearance (other than the clear zone).

The approval authority for design exceptions on the Interstate System or the Appalachian Development Highway System is with the **FHWA Division Administrator**. The approval authority for design exceptions on any other system is with the **TDOT Director of the Roadway Design Division**.

Design exception requests for Interstate or Appalachian Development Highway System projects shall be submitted to the FHWA Division Administrator **from** the Director of the Roadway Design Division.

All applicable material from the following list shall be addressed in narrative form on the **Design Exception and Justification Form**, shown in Figure 3-1, by the Roadway Design Division, Design Manager who is responsible for the design of the project for which the design exception request is made. For locally developed projects, the highest local official responsible for the project is responsible for this task.

1. Accident experience or data.
2. The effect of the variance from the design standard on safety and operation of the facility.
3. Any safety mitigation measures considered and provided to minimize the effect of the reduced design.
4. The compatibility of the design and operation with adjacent sections.
5. The comparative cost of the full standard versus the lower design being proposed.
6. The long term effect of the reduced design as compared to the full standard.
7. The difficulty in obtaining the full standard such as right-of-way restriction, delays, environmental impacts, etc.
8. Any capacity reductions or operational problems caused by the proposed exception.
9. Level of service for full standards versus the reduced design.
10. The cumulative effect of more than one standard that is being reduced.
11. The possibility of improving or correcting the reduced design feature in the future.

The completed Design Exception and Justification Form including any attachments shall be submitted to the appropriate Assistant Director of Roadway Design Division or Regional Project Development Director (PDD) for review and recommendation. ~~The design exception will then be distributed to a Design Exception Review Committee appointed by the Director of the Roadway Design Division. The Design Exception Review Committee~~ Assistant Director of PDD will review the exception and provide a recommendation regarding approval of the design exception. If necessary, ~~the review committee will provide the Design Manager with any comments regarding the proposed exception~~ will be provided to the Design Manager prior to making a recommendation regarding approval of the exception. Once recommended the Design Exception and Justification Form will be submitted to the Roadway Design Division Director for final approval or forwarding to FHWA.

Approved design exceptions **shall** be noted, with approval date, in the lower right corner of the title sheet.



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DESIGN EXCEPTION AND JUSTIFICATION FORM

TO: _____, Division Administrator, FHWA ([Exceptions requiring FHWA approval](#))
or
Director, Roadway Design Division, TDOT ([All other exceptions](#))

FROM: _____, Director, Roadway Design Division, TDOT ([Exceptions requiring FHWA approval](#))
Design Manager, Roadway Design Division, TDOT
or
Highest Local Official Responsible for the Project, Title ([Locally Developed Projects](#))

DATE: _____

SUBJECT: Design Exception Request
Project No. _____
Pin No. _____
Project Description: _____

CONTROLLING CRITERIA FOR WHICH EXCEPTION IS REQUESTED:

Design Speed	<input type="checkbox"/>	Lane Width	<input type="checkbox"/>	Shoulder Width	<input type="checkbox"/>	Grades	<input type="checkbox"/>
Horizontal Alignment	<input type="checkbox"/>	Vertical Alignment	<input type="checkbox"/>	Cross Slopes	<input type="checkbox"/>		
Stopping Sight Distance	<input type="checkbox"/>	Superelevation	<input type="checkbox"/>	Bridge Width	<input type="checkbox"/>		
Horizontal Clearance (other than clear zone)	<input type="checkbox"/>	Vertical Clearance	<input type="checkbox"/>	Structural Capacity	<input type="checkbox"/>		

DESIGN EXCEPTION REQUESTED:

[\(Note: List location and controlling element of the feature when an exception is requested. Example: 1\) Station 4+50, 30 mph horizontal curve 2\) Station 10+00 to 13+00, 11ft. lane width instead of 12ft. 3\) 20 mph vertical alignment \(Sag K=24\) instead of 40 mph\)](#)

**Figure 3-1
Design Exception and Justification Form**

DESIGN DATA:

Highway Functional Classification: _____
Standard for the Above Classification: _____
Existing Posted Speed: _____
Proposed Posted Speed: _____
Type of Terrain: _____
Rural or Urban Area: _____
Traffic Data: ADT (20_____): _____ D: _____
ADT (20_____): _____ T: _____
DHV: _____ V: _____

DESIGN FEATURES:

	Standard	Existing	Proposed	N/A
Cross Slope:	_____	_____	_____	_____
Superelevation:	_____	_____	_____	_____
Minimum Radius of Curve:	_____	_____	_____	_____
Minimum Stopping Sight Distance:	_____	_____	_____	_____
Minimum "K" Value for Crest Vertical Curve:	_____	_____	_____	_____
Minimum "K" Value for Sag Vertical Curve:	_____	_____	_____	_____
Maximum Grade:	_____	_____	_____	_____

ROADWAY TYPICAL SECTION:

	Standard	Existing	Proposed	N/A
Horizontal Clearance: (Other than the clear zone)	_____	_____	_____	_____
Shoulder Widths:	_____	_____	_____	_____
Outside Shoulders:	_____	_____	_____	_____
Inside Shoulders:	_____	_____	_____	_____
Lane Width:	_____	_____	_____	_____

BRIDGE FEATURES:

	Standard	Existing	Proposed	N/A
Traffic Lane Widths:	_____	_____	_____	_____
Outside Shoulder Widths:	_____	_____	_____	_____
Inside Shoulder Widths:	_____	_____	_____	_____
Load Capacity or Sufficiency Rating:	_____	_____	_____	_____
Vertical Clearance:	_____	_____	_____	_____
To Waterway:	_____	_____	_____	_____
To Other Highway:	_____	_____	_____	_____
To Railroad:	_____	_____	_____	_____

**Figure 3-1 (Continued)
Design Exception and Justification Form**

FACTORS CONSIDERED:

(Note: Each of the following factors shall be addressed in narrative form. If a factor is not applicable, or data is not available, only the appropriate box needs to be checked. For factors that are not a consideration, justification should be included.)

1) Accident experience or data

Data Available No Data Available Not Applicable

2) Effect of the variance from the design standards on safety and operation of the facility

Effect considered No effect on the facility Not Applicable

3) Safety mitigation measures considered and provided

Measures provided Measures not justified Not Applicable

4) Compatibility of the design and operation with adjacent sections

Considered Not a Consideration Not Applicable

5) Comparative cost of the full standard versus the lower design proposed

Considered Not a Consideration Not Applicable

6) Long term effect of the reduced design as compared to the full standard

Considered Not a Consideration Not Applicable

7) Difficulty obtaining the full standard such as right-of-way restriction, environmental impacts, etc.

Considered Not a Consideration Not Applicable

8) Capacity reductions or operational reductions caused by the design

Considered Not a Consideration Not Applicable

9) Level of service for the full standard versus the proposed design

Considered Not a Consideration Not Applicable

10) Cumulative effect of more than one standard that is being reduced

Considered Not a Consideration Not Applicable

11) Possibility of improving or achieving the full standard feature in the future

Applicable Not Applicable Not on the state highway system

Figure 3-1 (Continued)
Design Exception and Justification Form

DESIGN EXCEPTION AND JUSTIFICATION:

(Note: This section shall include a narrative description of the design exception request and includes a recommendation for approval)

ATTACHMENTS:

(Note: Include appropriate items such as plan prints, accident data, estimates, sketches, photos, etc.)

DESIGN EXCEPTION IS RECOMMENDED FOR APPROVAL BY:

Regional Project Development Director or Assistant Director of Roadway Design Division

Comments Attached

APPROVED:

Division Administrator, FHWA
(Director, Roadway Design Division, TDOT)

Date