⇩ Project Type / Design Elements ⇨	Horiz. Align.	Vert. Align.	Lane Width	Shldr Width	Lane Transition	On/Off Conn.	Median Width	Cross Slope Lane	Cross Slope Shldr	Fill/ Ditch Slopes	Access[3]	Clear Zone[18]	Sign., Del., Illumin.	Basic Safety	Bike & Ped.	Bridges[11] Lane Width	Bridges[11] Shldr Width	Bridges[11] Vertical Clear-ance	Bridges[11] Structural Capacity	Intersections Turn Radii	Intersections Angle	Intersections I/S Sight Dist.	Barriers Term. & Trans. Section[12]	Barriers Std Run	Barriers Bridge Rail[14][19]
Preservation																									
Roadway																									
(3-1) Non-Interstate Freeway	DE/F	DE/F	DE/F	DE/F	DE/F	DE/F	DE/F	DE/F	DE/F	DE/F	DE/F		B	B		DE/F	DE/F	F					F	B	F
(3-2) HMA/PCCP/BST Overlays	DE/M	DE/M	DE/M	DE/M	DE/F	DE/F	DE/M	DE/M	DE/M	DE/M			B	B	M	DE/M	DE/M	F				B	F	B	F
(3-3) Replace HMA w/ PCCP at I/S	DE/M	DE/M	EU/M	EU/M	DE/F		DE/M	EU/M	DE/M	DE/M			B	B	M	DE/M	DE/M	F				B	F	B	F
Structures																									
(3-4) Bridge Replacement	F[2]	F[2]	F[2]	F[2]	F	F[2]	F[2]	F[2]	F[2]	F[2]		F	F		F	F[2]	F[2]	F	F	F[2]	F[2]	F	F	F	F
(3-5) Bridge Deck Rehab.													B	B	M			F					F[6]	F[22]	F
Improvements[16]																									
Mobility																									
(3-6) Non-Interstate Freeway	F	F	F	F	F	F	F	F	F	F	F	F	F		F	F	F	F	F	F	F	F	F	F	F
(3-7) Urban	F[2]	F[2]	F[2]	F[2]	F	F[2]	F[2]	F[2]	F[2]	F[2]	F	F	F		F	F[2]	F[2]	F	F	F[2]	F[2]	F	F	F	F
(3-8) Rural	F[2]	F[2]	F[2]	F[2]	F	F[2]	F[2]	F[2]	F[2]	F[2]	F	F	F		F	F[2]	F[2]	F	F	F[2]	F[2]	F	F	F	F
(3-9) HOV	F[2]	F[2]	F[2]	F[2]	F	F[2]	F[2]	F[2]	F[2]	F[2]	F	F	F		F	F[2]	F[2]	F	F	F[2]	F[2]	F	F	F	F
(3-10) Bike/Ped. Connectivity	(5)	(5)	(5)	(5)	(5)			(5)	(5)	(5)	(5)	(5)	(5)		F	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Safety																									
(3-11) Non-Interstate Freeway	F	F	F	F	F	F	F	F	F	F	F	F	F		F	F	F	F		F	F	F	F	F	F
(3-12) Intersection[1]			F[2]	F[2]	F					F[2]	F	F	F		M					F	F	F	F	F	F
(3-13) Corridor[1][24]	M[4]	M[4]	M[4]	M[4]	F	F[17]	M[4]	M[4]	M[4]	M[4]	F	F	F		F	M[4]	M[4]	F		M[4]	M[4]	F	F	F	F
(3-14) Median Barrier				DE/F																			F[20]	F[20]	
(3-15) Guardrail Upgrades				DE/F																			F	F[23]	
(3-16) Bridge Rail Upgrades																							F	F[22]	F
(3-17) Risk: Roadside										F	EU/F	F	F										F	F	F
(3-18) Risk: Sight Distance	F/M[21]	F/M[21]	F/M[21]	F/M[21]						F/M[21]	F[21]	F[21]	F		F	F[21]	F[21]	F[21]		F/M[21]	F/M[21]	F[21]	F	F	F
(3-19) Risk: Roadway Width			F/M[21]	F/M[21]	F[21]	F[21]	F/M[21]	F/M[21]	F/M[21]	F/M[21]	F	F	F		F	F[21]	F[21]	F[21]		F/M[21]	F/M[21]	F[21]	F	F	F
(3-20) Risk: Realignment	F[2]	F[2]	F[2]	F[2]	F	F[2]	F[2]	F[2]	F[2]	F[2]	F	F	F		F	F[2]	F[2]	F		F[2]	F[2]	F[2]	F	F	F
Economic Development																									
(3-21) Freight & Goods (Frost Free)[8]	F[2]	F[2]	F[2]	F[2]	F	F[2]	F[2]	F[2]	F[2]	F[2]	EU/F	F	B		EU/F[26]	DE/F	DE/F	F	F	EU/F	EU/F	EU/F	F	F	F
(3-22) Four-Lane Trunk System	F	F	F	F	F	F	F	F	F	F	F	F	F		F	F	F	F	F	F	F	F	F	F	F
(3-23) Rest Areas (New)	F	F	F	F	F	F	F	F	F	F	F	F	F		F	F	F	F		F	F	F	F	F	F
(3-24) Bridge Restrictions	F[2]	F[2]	F[2]	F[2]	F	F[2]	F[2]	F[2]	F[2]	F[2]		F	F		EU/F[26]	F[2]	F[2]	F	F	F[2]	F[2]	F	F	F	F
(3-25) Bike Routes (Shldrs)			EU/M	[7]	EU/F				EU/M	EU/M			B	B	F	EU/M	EU/M	F				B	F	B	EU/F

Design Matrix 3:
Main Line NHS Routes (Except Interstate)
Figure 325-5

- ☐ Not Applicable
- **F** Full design level. See Chapter 440.
- **M** Modified design level. See Chapter 430.
- **B** Basic design level. See Chapter 410.
- **F/M** Full for freeways/Modified for nonfreeway
- **DE** Design Exception
- **EU** Evaluate Upgrade

(1) Collision Reduction, or Collision Prevention (At-Grade Removal, Signalization & Channelization). Specific deficiencies that created the project must be upgraded to design level as stated in the matrix.

(2) Modified design level may apply based on a corridor or project analysis. See 325.03(5).

(3) If designated as L/A acquired in the Access Control Tracking System, limited access requirements apply. If not, managed access applies. See 325.03(5).

(4) Full design level may apply based on a corridor or project analysis. See 325.03(5).

(5) For bike/pedestrian design see Chapters 1020 and 1025.

(6) Applies only to bridge end terminals and transition sections.

(7) 4 ft minimum shoulders.

(8) If all weather structure can be achieved with spot digouts and overlay, modified design level applies to NHS highways and basic design level applies to non-NHS highways.

(11) See Chapter 1120.

(12) Impact attenuators are considered as terminals.

(14) Includes crossroad bridge rail. See Chapter 710.

(16) For design elements not in the matrix headings, apply full design level as found in the applicable chapters and see 325.03(2).

(17) DE for existing acceleration/deceleration lanes when length meets posted freeway speed and no significant accidents. See Chapter 940.

(18) On managed access highways within the limits of incorporated cities and towns, City and County Design Standards apply to areas outside the curb or outside the paved shoulder where no curb exists.

(19) The funding sources for bridge rail are a function of the length of the bridge. Consult programming personnel.

(20) Applies to median elements only.

(21) Analyses required. See 325.03(5) for details.

(22) Upgrade barrier, if necessary, within 200 ft of the end of the bridge.

(23) See description of Guardrail Upgrades Project Type, 325.03(1) regarding length of need.

(24) Apply Full design level to projects that realign or reconstruct significant portions of the alignment.

(26) Sidewalk ramps must be addressed for ADA compliance. See Chapter 1025.

Design Matrix 3:
Main Line NHS Routes (Except Interstate)
Figure 325-5 (continued)