⇩ Project Type	Ramps and Collector Distributors														Ramp Terminals			Barriers			Cross Road								Barriers		
Design Elements ⇨	Horiz. Align.	Vert. Align.	Lane Width	Shldr Width	Lane Tran- sition	On/Off Conn.	Cross Slope Lane	Cross Slope Shldr	Fill/ Ditch Slopes	Limited Access	Clear Zone	Sign., Del., Illumin. (9)(10)	Vertical Clear. (11)	Bike & Ped.	Turn Radii	Angle	I/S Sight Dist.	Term. & Trans. Section (12)	Std Run	Bridge Rail (14)(19)	Lane Width	Shldr Width	Fill/ Ditch Slopes	Limited Access	Clear Zone	Sign., Del., Illumin. (10)	Vert. Clear. (11)	Ped. & Bike	Term. & Trans. Section (12)	Std Run	Bridge Rail (14)(19)
(2-1) Preventive Maintenance																															
Pavement Restoration																															
(2-2) Diamond Grinding											EU	F(15)						F	EU	F					EU	F(15)			F	EU	F
(2-3) Milling with HMA Inlays									EU		F	F(15)	F	M				F	F	F			EU		F	F(15)		M	F	F	F
(2-4) Nonstructural Overlay							EU	EU	EU		F	F(15)	F	M				F	F	F			EU		F	F(15)		M	F	F	F
Pavement Rehab./Resurf.																															
(2-5) HMA Structural Overlays	EU	DE	F	F	F	F(17)	F	EU	F	F	F	F(15)	F	M	F	F	F	F	F	F	DE	DE	DE	F	F	F(15)	F	M	F	F	F
(2-6) PCCP Overlays	EU	DE	F	F	F	F(17)	F	EU	F	F	F	F(15)	F	M	F	F	F	F	F	F	DE	DE	DE	F	F	F(15)	F	M	F	F	F
(2-7) Dowel Bar Retrofit	DE		DE	DE	F	F(17)	DE		F	F	F	F(15)	DE		F	F	F	F	F	F				F		F(15)			F	F	F
Bridge Rehabilitation																															
(2-8) Bridge Deck Rehabilitation													F	M				F(6)	F(22)	F							F	M	F(6)	F(22)	F
Safety																															
(2-9) Intersection			F	F	F				F	F	F	F		M	F	F	F	F	F	F			F	F	F	F	F	M	F	F	F
(2-10) Guardrail Upgrades				DE							F							F	F(23)										F	F(23)	
(2-11) Bridge Rail Upgrades																		F	F(22)	F									F	F(22)	F
Reconstruction (16)																															
(2-12) New/Reconstruction	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F

Design Matrix 2:
Interstate Interchange Areas
Figure 325-4

- ☐ Not Applicable
- **F** Full design level. See Chapter 440.
- **M** Modified design level. See Chapter 430.
- **DE** Design Exception to full design level.
- **EU** Evaluate Upgrade to full design level.

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

(9) Continuous shoulder rumble strips required in rural areas. See Chapter 700.

(10) See Chapter 820.

(11) See Chapter 1120.

(12) Impact attenuators are considered as terminals.

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

(15) EU for signing and illumination.

(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.

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

(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.

Design Matrix 2:
Interstate Interchange Areas
Figure 325-4 (continued)