

Appendix F

Design Standards and Typical Cross Section

TABLE F1
Caltrans Highway Design Manual (HDM) Expressway Design Standards

Feature	Value	HDM Section
Design Speed on SR 79	110-130 km/h (68.4-80.8 mi/h)	101.2
Design Speed on Cross Streets	Use Riverside County standards, but use 75 km/h as a minimum	101.1
Stopping Sight Distance	220-290 m (721.8-951.4 ft) (relative to design speed)	201.1
Decision Sight Distance	335-375 m (1099.1-1230.3 ft) (relative to design speed)	201.7
Minimum Radius of Curve	900 m (2,952.8 ft)	203.2
Superelevation Rates	Use $E_{max} = 0.10$ column on Table 202.2	202.2
Maximum Grade	3.0% on SR 79 4.0% on Cross Streets	204.3
Access Spacing (Expressway)	800 m (2624.7 ft)	205.1
Airway-Highway Clearance Requirements (for Hemet-Ryan Airport)	Figure 207.2A	207
Lane Widths	3.6 m (11.8 ft)	301.2
Shoulder Widths	3.0 m (9.8 ft) (Right and Left)	302.1
Side Slopes	1:4 or Flatter	304.1
Side Slopes Uniform Catch Point	5.5 m (18.0 ft) (minimum)	304.1(e)
Clearance from Slope Catch Point to Right-of-Way	5.0 m (16.4 ft)	304.2
Median Width: Edge of Traveled Way to Edge of Traveled Way	25.8 m (84.6 ft) (applied to four-lane cross section on SR 79)	305.1 (b)
Median Cross Slopes	1:20	305.2
Clear Recovery Zone	9.0 m (29.5 ft)	309.1
Vertical Clearance	5.1 m (16.7 ft) for a finished structure 4.6 m (15.1 ft) for temporary falsework 7.32 m (24 ft) over the San Jacinto Branch Line	309.2 and 309.5
Horizontal Clearance from Railroad Tracks	7.62 m (25 ft) measured from center of track	
Outer Separation from SR 79 to Frontage Road	12 m (39.4 ft)	310.2
Intersection Angle	90 degrees Preferred, 75 degrees Minimum	403.3
Design Vehicle	STAA truck	404.2
Interchange Spacing (Freeway)	1.5 km (4921.3 ft) between local street interchanges 3.0 km (9842.5 ft) between a freeway-to-freeway interchange and a local street interchange	501.3
Sidewalk width	1.5 m (4.9 ft) (minimum)	105.1

km/h – kilometers per hour
mi/h – miles per hour
ft – feet
m – meters

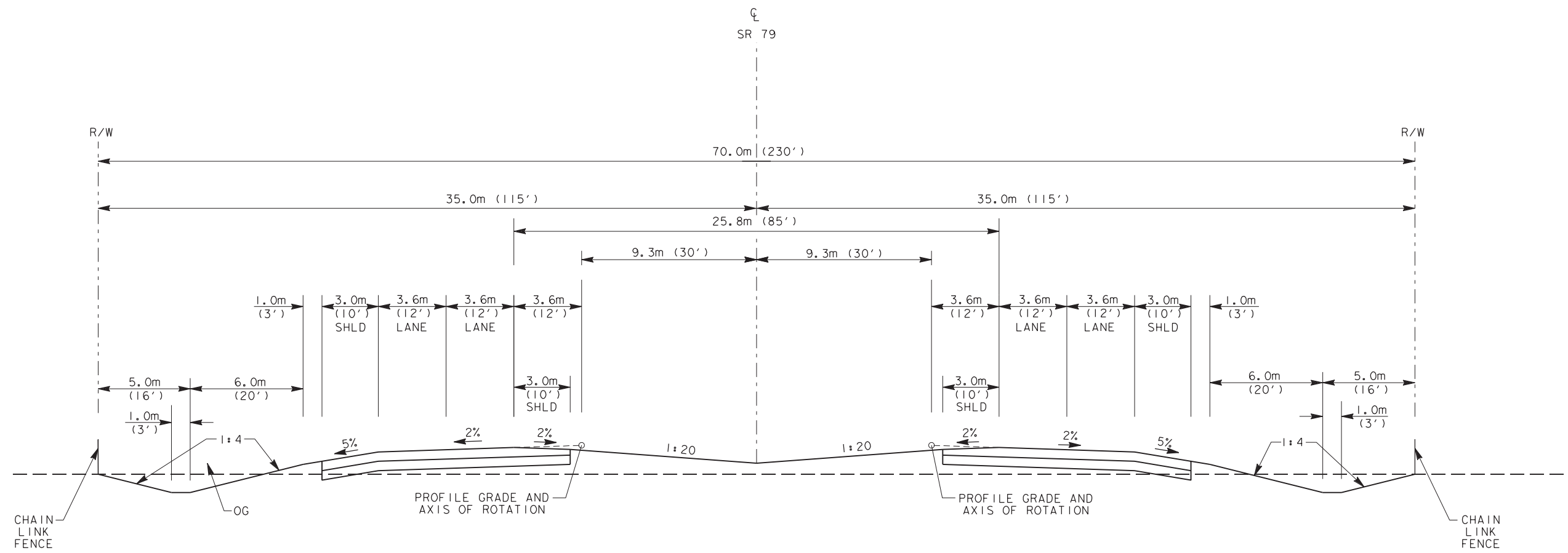


Figure F1
Typical Cross Section
Controlled Access Expressway
with Adjacent Graded Swales
State Route 79 Project

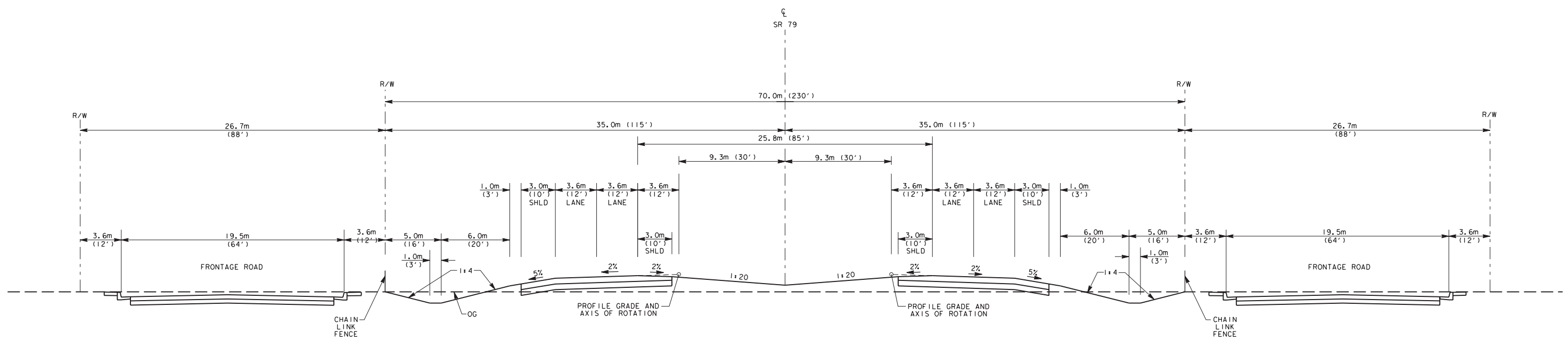


Figure F2
 Typical Cross Section
 Controlled Access Expressway
 with Adjacent Frontage Roads
 State Route 79 Project