

URBAN CONDITIONS

LOWER SUPERELEVATION RATES MAY BE NECESSARY IN URBAN AREAS WHERE RESTRICTED SPEED ZONES OR ROAD INTERSECTIONS ARE CONTROLLING FACTORS. IN ADDITION, ESTABLISHED ROAD GRADES, CURB, OR DRAINAGE MAY PROVE DIFFICULT TO ALTER. SUCH CONDITIONS MAY WARRANT, FOR EXAMPLE, A REDUCTION IN THE SUPERELEVATION RATE, DIFFERENT RATES FOR EACH HALF OF THE ROADBED OR BOTH. APPROVAL OF THE CITY ENGINEER IS REQUIRED FOR SUCH DEVIATIONS.

AXIS OF ROTATION

THE AXIS OF ROTATION FOR SUPERELEVATION IS USUALLY THE CENTERLINE OF THE ROADBED. HOWEVER, IN SPECIAL CASES SUCH AS ROADS WHERE CURVES ARE PRECEDED BY LONG RELATIVELY LEVEL TANGENTS, THE PLANE OF SUPERELEVATION MAY BE ROTATED ABOUT THE INSIDE EDGE OF THE PAVEMENT TO IMPROVE PERCEPTION OF THE CURVE. IN FLAT COUNTRY, DRAINAGE POCKETS CAUSED BY SUPERELEVATION MAY BE AVOIDED BY CHANGING THE AXIS OF ROTATION FROM THE CENTERLINE TO THE INSIDE EDGE OF THE PAVEMENT. INTERSECTION MAY REQUIRE SPECIAL TREATMENT.

SUPERELEVATION TRANSITION



A SUPERELEVATION TRANSITION IS VARIABLE IN LENGTH DEPENDING UPON THE AMOUNT OF SUPERELEVATION. WITH RESPECT TO THE BEGINNING. OR END OF CURVE, TWO-THIRDS OF THE TRANSITION IS ON THE TANGENT APPROACH AND ONE-THIRD WITHIN THE CURVE. THIS RESULTS IN TWO-THIRDS OF THE FULL SUPERELEVATION AT THE BEGINNING OF THE CURVE.

SUPERELEVATION SHALL BE DESIGNED AS SHOWN ON PLATE NOS. 3-6 & 3-7. SHOULDER TRANSITIONS NORMALLY SHALL BE MADE IN THE SAME MANNER AS TRAVELED WAY TRANSITIONS.

AFTER A SUPERELEVATION TRANSITION IS COMPUTED, PROFILES OF THE PAVEMENT EDGES SHOULD BE PLOTTED AND IRREGULARITIES REMOVED BY INTRODUCING SMOOTH CURVES. FOR WIDE PAVEMENT IT IS OFTEN ADVANTAGEOUS TO PLOT INTERMEDIATE PROFILES. ON CURVED INTERCHANGE ROADWAYS, A PRONOUNCED AND UNSIGHTLY SAG MAY DEVELOP ON THE LOW SIDE OF THE SUPERELEVATION. THIS IS CORRECTED BY ADJUSTING THE GRADES ON THE EDGES OF PAVEMENT THROUGH THE CURVE.

SUPERELEVATION OF COMPOUND CURVES

SUPERELEVATION OF COMPOUND CURVES SHALL BE ACCOMPLISHED AS SHOWN ON PLATE 3-7. IN CASE 2, WHEN THE STANDARD SUPERELEVATION OF BOTH CURVES IS PRACTICALLY EQUAL, THE SUPERELEVATION RATIO FOR THE LONGER RADIUS CURVES SHALL BE ARBITRARILY REDUCED BY ONE-THIRD. THIS WILL TEND TO EQUALIZE THE SAFE SPEED THROUGHOUT THE ENTIRE LENGTH OF THE COMPOUND CURVE.

				APPROVED: 	
CHANGE	DESCRIPTION	DATE	INITIAL	CITY ENGINEER	DATE