URBAN LOW SPEED DESIGN TABLE					
DV/NC (Km/h)	70	60	50	40	30
MAX. f	0.150	0.171	0.190	0.233	0.285

FRICTION FACTORS (f) FOR ODD VELOCITIES NOT LISTED SHOULD BE DERIVED BY INTERPOLATION.

LEGEND

e- SUPERELEVATION RATE IN PERCENT.

f- FRICTION FACTOR.

R- RADIUS OF CURVE.

DV- DESIGN VELOCITY UTILIZING SUPERELEVATION.

NC- MAXIMUM VELOCITY WITH NO SUPERELEVATION (NORMAL CROWN).

GENERAL DESIGN CONSIDERATIONS

1. WHEN "URBAN LOW SPEED" DESIGNS UTILIZE SUPERELEVATION, THEY WILL BE SUPERELEVATED BY AN AMOUNT EQUAL TO THE NORMAL CROWN (TYPICALLY 2.0%) AND THE APPROXIMATE MAXIMUM SAFE SPEED (DV) AFFORDED THEREBY.
2. WHEN "URBAN LOW SPEED DESIGN" WITH NO SUPERELEVATION, THE APPROXIMATE MAXIMUM SAFE SPEED (NC) IS CALCULATED USING A NEGATIVE NORMAL CROWN (TYPICALLY -2.0 %).
3. WHEN THE CURVE IS SUPERELEVATED, THE Lr IS APPLIED IN THE SAME MANNER AS IN URBAN CONDITIONS WITH THE TANGENT RUNOUT (Lt) BEING EQUAL TO THE Lr VALUE. THE TANGENT RUNOUT (Lt) IS ALWAYS ACHIEVED OUTSIDE OF THE SUPERELEVATION RUNOFF (Lr).
4. PLEASE NOTE THAT THE RADIUS VALUES LISTED ON PAGE 802.24 HAVE BEEN ROUNDED UP TO THE NEAREST METER INCREMENT.

EXAMPLES

DV = 31 km/h

e = +2.0 %

f MAXf ± INTERPOLATED DIFFERENCE BETWEEN LISTED FRICTION FACTORS

$f = 0.233 + 0.9(0.285 - 0.233) = 0.280$

$Rmin. = DV^2/127(e+f)$

$Rmin. = (31)^2/127(0.02 + 0280) = 25.2$ m

NC = 57 km/h

e = −2.0 %

f = MAXf ± INTERPOLATED DIFFERENCE BETWEEN LISTED FRICTION FACTORS

$f = 0.171 + 0.3(0.19 - 0.171) = 0.176$

$Rmin. = NC^2/127(-e+f)$

$Rmin. = (57)^2/127(-0.02 + 0.176) = 164$ m

SPECIFICATION REFERENCE

METHODOLOGIES FOR CALCULATING TC-5.01 VALUES FOR URBAN LOW-SPEED STREETS

VIRGINIA DEPARTMENT OF TRANSPORTATION