



# **Appendix B:**

# **Abstract of Japanese Road Geometry**

# Types of Road

	Country side	Urban area
Highway or Limited access (toll) road	Type 1	Type 2
General road	Type 3	Type 4

Type 1



Type 2



Type 3



Type 4



# Type 1 (Inter-city highway)

## ◆ Class is defined with planned traffic volume

draft class	Class 1	Class 2	Class 3	Class 4
network feature				
Planning speed $v$ [km / h]	120	100	80	60
Minimum curve radius $R$ [m]	710(570)	460(380)	280(230)	150(120)
Minimum clothoid parameter $A$ [m]	100	85	70	50
Maximum longitudinal slope $s$ [%]	2(5)	3(6)	4(7)	5(8)
Minimum convex radius $H_k$ [m]	11000	6500	3000	1400
Minimum tube diameter $H_w$ [m]	4000	3000	2000	1000
Stop visual range ( $s = 0\%$ ) $S_h$ [m]	210	160	110	75
Minimum bank $q$ [%]				
Maximum bank in curves $q$ [%]	6.0~10.0	6.0~10.0	6.0~10.0	6.0

Maximum bank is set according to climate; maximum bank of snowfall area is set lower.  
Major class is highlighted (Japanese data is mainly collected in class 2)

# Type 2 (Metropolitan highway)

## ◆ Class is defined with planned traffic volume

draft class	Class 1	Class 2
network feature		
Planning speed $v$ [km / h]	80(60)	60(40)
Minimum curve radius $R$ [m]	280(230)	150(120)
Minimum clothoid parameter $A$ [m]	70	50
Maximum longitudinal slope $s$ [%]	4(7)	5(8)
Minimum convex radius $H_k$ [m]	3000	1400
Minimum tube diameter $H_w$ [m]	2000	1000
Stop visual range ( $s = 0\%$ ) $S_h$ [m]	110	75
Minimum bank $q$ [%]		
Maximum bank in curves $q$ [%]	6.0	6.0

Maximum bank is set according to climate; maximum bank of snowfall area is set lower.  
Major class is highlighted (Collected data contains both Class 1 & 2)