STANDARD

The following target speeds shall apply to county roads in a manner consistent with the guidance provided in the APPLICATION section of this standard. A Design Exception for a Target Speed outside the standard range may be issued by DOT on the basis of an Engineering and Traffic Investigation. This investigation should include a comprehensive analysis of the existing and planned development, the connecting transportation system, and the environmental conditions surrounding the project. Situations in which a design exception for a lower target speed may be warranted include, but are not limited to, roadways with pedestrian and bicycle activity higher than typically encountered in densely developed urban core areas. Design exceptions for higher target speeds may also be warranted in some circumstances. The Design Exception documentation should clearly document project-specific circumstances requiring variance from the standard range.

Road Classification/ Area Type	Design/Target Speed			
	Urban	Suburban	Rural	
Freeway	Refer to AASHTO Interstate Design Guide			
Controlled Major Highway	40 – 50	40 – 55	45 – 55	note 1
Parkway	30 – 40 **25**	30 – 45	45 – 55	note 1
Major Highway	30 – 40 **25**	30 – 50 **30-40**	45 – 55	notes 1, 2
Country Arterial		35 – 50 **35-40**	35 – 50 **30-45**	note 2
Arterial	30 – 35 **25**	30 – 40 **30-35**	35 – 50 **35-40**	note 2
Minor Arterial	30 – 35 **25**	30 – 35 **30**	35 – 50 **35-40**	note 2
Business District Street	25 – 30 **25**	25 – 35 **25**	25 – 35 **25**	
Industrial Street	30 – 40 **25**	30 – 40 **25**	30 – 40 **25**	
Country Road	–	25 – 40	25 – 40	
Primary and Principal Secondary Residential Streets	Minimum 300-foot centerline radius (Minimum Sight distance for 30 mph)			
Secondary Residential Street	Minimum 150-foot centerline radius (Minimum Sight distance for 25 mph)			
Tertiary Residential Street	Minimum 100-foot centerline radius (Minimum Sight distance for 25 mph)			

Note 1: The use of the 55 mph target speed is limited to divided highways.

Note 2: In suburban and rural areas, the target speed in commercial areas is 30 mph; the target speed in more densely developed residential areas is 35 mph.

ATTACHMENT 1

Roadway Type	Std. No.	ROW	Maintenance Offset	Sidewalk Width	Buffer Width	Parking Lane Width	Bike Lane/Shoulder	Outside Lane Width	Inside Lane Width	Median /Center Lane Width	Inside Lane Width	Outside Lane Width	Bike Lane/Shoulder	Parking Lane Width	Buffer Width	Sidewalk Width	Maintenance Offset	Notes
Tertiary Residential Street-Sidewalk on One Side	2001.01	44'	2	5	5	0	0	10	0	0	0	10	0	0	12	0	0	1
Tertiary Residential Street-Sidewalk on Both Sides	2001.02	50'	2	5	8	0	0	10	0	0	0	10	0	0	8	5	2	1
Tertiary Residential Street-Open Section	2001.03	74'	2	5	20	0	0	10	0	0	0	10	0	0	20	5	2	2,3

Notes: 1. Parking lane may be added where regular on-street parking is expected
2. Occasional parking may be accommodated in the buffer
3. New Standard ROW needed to avoid sidewalk placement in a PIE

Secondary Residential Street- No Parking	2002.01	60'	2	5	10	0	0	13	0	0	0	13	0	0	10	5	2	
Secondary Residential Street- Parking on One Side	2002.02	60'	2	5	7.5	8	0	10	0	0	0	11.5	0	0	9	5	2	
Secondary Residential Street-Parking on Both Sides	2002.03	70'	2	5	10	8	0	10	0	0	0	10	0	8	10	5	2	
Secondary Residential Street- Open Section	2002.04	78'	2	5	20	0	2	10	0	0	0	10	2	0	20	5	2	1

Notes: 1. New Standard ROW needed to avoid Sidewalk placement in a PIE

Roadway Type	Std. No.	ROW	Maintenance Offset	Sidewalk Width	Buffer Width	Parking Lane Width	Bike Lane/Shoulder	Outside Lane Width	Inside Lane Width	Median /Center Lane Width	Inside Lane Width	Outside Lane Width	Bike Lane/Shoulder	Parking Lane Width	Buffer Width	Sidewalk Width	Maintenance Offset	Notes
Primary/Principal Secondary Residential Street- With Bike Lane and Parking on One Side	2003.08	70'	2	5	8.5	8	5	10	0	0	0	10	5.5	0	9	5	2	
Primary/Principal Secondary Residential Street- With Bike Lane and Parking on Both Sides	2003.09	84'	2	6	10	8	6	10	0	0	0	10	6	8	10	6	2	
Primary/Principal Secondary Residential Street- No Parking	2003.10	70'	2	6	14	0	0	13	0	0	0	13	0	0	14	6	2	
Primary/Principal Secondary Residential Street- Parking on One Side	2003.11	70'	2	6	12	8	0	11	0	0	0	11.5	0	0	11.5	6	2	
Primary/Principal Secondary Residential Street- Parking on Both Sides	2003.12	70'	2	5	9	8	0	11	0	0	0	11	0	8	9	5	2	
Primary/Principal Secondary Residential Street- Open Section	2003.14	84'	2	5	20	0	5	10	0	0	0	10	5	0	20	5	2	

Roadway Type	Std. No.	ROW	Maintenance Offset	Sidewalk Width	Buffer Width	Parking Lane Width	Bike Lane/Shoulder	Outside Lane Width	Inside Lane Width	Median /Center Lane Width	Inside Lane Width	Outside Lane Width	Bike Lane/Shoulder	Parking Lane Width	Buffer Width	Sidewalk Width	Maintenance Offset	Notes
Urban Arterial Road-4 Lanes	2004.01	80'	2	7	~~6~~ **7**	0	0	14	~~11~~ **10**	0	~~11~~ **10**	14	0	0	~~6~~ **7**	7	2	
Urban Arterial Road-4 Lanes, With Bike Lanes	2004.02	80'	2	~~5.5~~ **6**	~~6~~ **6.5**	0	5.5	10	~~11~~ **10**	0	~~11~~ **10**	10	5.5	0	~~6~~ **6.5**	~~5.5~~ **6**	2	
Urban Arterial Road-5 Lanes	2004.03	90'	2	6	~~6~~ **7.5**	0	0	14	~~11~~ **10**	~~12~~ **11**	~~11~~ **10**	14	0	0	~~6~~ **7.5**	6	2	1
Urban Arterial Road-5 Lanes, With Bike Lanes	2004.04	90	2	~~5~~ **7**	5.5	0	5.5	10	~~11~~ **10**	~~12~~ **10**	~~11~~ **10**	10	5.5	0	5.5	~~5~~ **7**	2	4
Divided Urban Arterial Road-4 Lanes	2004.05	100'	2	~~8~~ **10**	~~6~~ **7**	0	0	14	~~11.5~~ **11**	~~17~~ **12**	~~11.5~~ **11**	14	0	0	~~6~~ **7**	~~8~~ **10**	2	
Divided Urban Arterial Road-4 Lanes, With Bike Lanes	2004.06	100'	2	~~6.5~~ **8.5**	~~6~~ 7	0	5.5	10	~~11.5~~ **11**	~~17~~ **12**	~~11.5~~ **11**	10	5.5	0	~~6~~ **7**	~~6.5~~ **8.5**	2	
Suburban Arterial Road-4 Lanes	2004.07	80'	2	~~5~~ **6**	~~8~~ **7**	0	0	14	11	0	11	14	0	0	~~8~~ **7**	~~5~~ **6**	2	
Suburban Arterial Road- 4 Lanes, With Bike Lanes	2004.08	80'	2	~~5~~ **6**	~~6.5~~ **5.5**	0	5.5	10	11	0	11	10	5.5	0	~~6.5~~ **5.5**	~~5~~ **6**	2	
Divided Suburban Arterial Road-4 Lanes	2004.09	100'	2	~~5~~ **6**	~~9~~ **7.5**	0	0	14	11.5	~~17~~ **18**	11.5	14	0	0	~~9~~ **7.5**	~~5~~ **6**	2	2
Divided Suburban Arterial Road- 4	2004.10	100'	2	~~5~~ **6**	~~6.5~~ **5**	0	5.5	11	11.5	~~17~~ **18**	11.5	11	5.5	0	~~6.5~~ **5**	~~5~~ **6**	2	2

Lanes, With Bike Lanes																		
Suburban Arterial Road-5 Lanes	2004.11	90'	2	~~5~~ **6**	~~7~~ **6.5**	0	0	14	11	~~12~~ **11**	11	14	0	0	~~7~~ **6.5**	~~5~~ **6**	2	1
Suburban Arterial Road-5 Lanes, With Bike Lanes	2004.12	90'	2	~~5~~ **6**	~~5.5~~ **5**	0	5.5	10	11	~~12~~ **11**	11	10	5.5	0	~~5.5~~ **5**	~~5~~ **6**	2	5
Suburban Arterial Road-4 Lanes, Open Section, With Bike Lanes	2004.14	110'	2	~~5~~ **6**	~~21~~ **20**	0	5	11	11	0	11	11	5	0	~~21~~ **20**	~~5~~ 6	2	6
Divided Suburban Arterial Road- 4 Lanes, Open Section with Bike Lanes	2004.16	120'	2	~~5~~ **6**	~~17~~ **15**	0	5	11	~~11.5~~ **12**	~~17~~ **18**	~~11.5~~ **12**	11	5	0	~~17~~ **15**	~~5~~ **6**	2	
Rural Arterial Road- 4 Lanes , Open Section, With Bike Lanes	2004.18	100'	2	5	~~17.5~~ **14***	0	5	12	12	0	12	12	5	0	~~17.5~~ **14***	0	2	3

Notes: 1. Median is two-way left turn lane
2. For 40 mph, adjust the curbside dimension to accommodate tree maintenance offset area
3. Use Suburban Open Section Standard 2004.14 to accommodate sidewalks and 2004.16 to accommodate sidewalks & median
4. Std. 2004.06 is preferred
5. Std. 2004.10 is preferred
6. Std. 2004.16 is preferred

* These elements were adjusted to correct an arithmetic error.

Roadway Type	Std. No.	ROW	Maintenance Offset	Sidewalk Width	Buffer Width	Parking Lane Width	Bike Lane/Shoulder	Outside Lane Width	Inside Lane Width	Median /Center Lane Width	Inside Lane Width	Outside Lane Width	Bike Lane/Shoulder	Parking Lane Width	Buffer Width	Sidewalk Width	Maintenance Offset	Notes
Urban Minor Arterial Road-2 Lanes	2004.19	70	2	8	10.5	0	0	14.5	0	0	0	14.5	0	0	10.5	8	2	
Urban Minor Arterial Road- 2 Lanes, With Parking	2004.20	70'	2	7	~~7~~ **8**	8	0	~~11~~ **10**	0	0	0	~~11~~ **10**	0	8	~~7~~ **8**	7	2	
Urban Minor Arterial Road-2 Lanes, With Bike Lanes	2004.21	70'	2	8	~~8.5~~ **9**	0	~~5.5~~ **6**	~~11~~ **10**	0	0	0	~~11~~ **10**	~~5.5~~ **6**	0	~~8.5~~ **9**	8	2	
Urban Minor Arterial Road-2 Lanes, With Bike Lanes and Parking	2004.22	80'	2	~~7~~ **8**	6	8	6	~~11~~ **10**	0	0	0	~~11~~ **10**	6	8	6	~~7~~ **8**	2	
Urban Minor Arterial Road-3 Lanes	2004.23	70'	2	~~7~~ **8**	6	0	0	14	0	~~12~~ **10**	0	14	0	0	6	~~7~~ **8**	2	1
Urban Minor Arterial Road-3 Lanes With Parking	2004.24	80'	2	~~7~~ **9**	6	8	0	~~11~~ **10**	0	~~12~~ **10**	0	~~11~~ **10**	0	8	6	~~7~~ **9**	2	1
Suburban Minor Arterial Road-2 Lanes	2004.25	70'	2	5	13.5	0	0	14.5	0	0	0	14.5	0	0	13.5	5	2	
Suburban Minor Arterial Road- 2 Lanes, With Bike Lanes	2004.26	70'	2	5	11.5	0	5.5	11	0	0	0	11	5.5	0	11.5	5	2	
Suburban Minor	2004.27	70'	2	5	9	8	0	11	0	0	0	11	0	8	9	5	2	

Arterial Road-2 Lanes, With Parking																		
Suburban Minor Arterial Road-2 Lanes, With Bike Lanes and Parking	2004.28	80'	2	5	8	8	6	11	0	0	0	11	6	8	8	5	2	
Suburban Minor Arterial Road-3 Lanes, With Parking	2004.29	80'	2	~~5~~ **6**	~~8~~ **7.5**	8	0	11	0	~~12~~ **11**	0	11	0	8	~~8~~ **7.5**	~~5~~ **6**	2	1
Suburban Minor Arterial Road-2 Lanes, Open Section With Bike Lanes	2004.31	80'	2	5	17	0	5	11	0	0	0	11	5	0	17	5	2	
Rural Minor Arterial Road-With Bike Lanes	2004.33	82'	2	5	20	0	5	12	0	0	0	12	5	0	19	0	2	2

Notes: 1. Median is two way left turn lane
2. Sidewalk Optional

ROADWAY TYPE	STD. NO.	ROW	MAINTENANCE OFFSET	SIDEWALK WIDTH	BUFFER WIDTH	PARKING LANE WIDTH	BIKE LANE/SHOULDER	OUTSIDE LANE WIDTH	INSIDE LANE WIDTH	MEDIAN /CENTER LANE WIDTH	INSIDE LANE WIDTH	OUTSIDE LANE WIDTH	BIKE LANE/SHOULDER	PARKING LANE WIDTH	BUFFER WIDTH	SIDEWALK WIDTH	MAINTENANCE OFFSET	NOTES
County Road	2004.34	62'	2	0	17	0	2	10	0	0	0	10	2	0	17	0	2	
Country Arterial	2004.35	70'	2	0	18	0	4	11	0	0	0	11	4	0	18	0	2	
Business District Street-2 Lanes with Parking on One Side	2005.01	60'	2	~~6~~ **7**	~~6.5~~ **6**	~~8~~ **9**	0	~~11~~ **10**	0	0	0	~~12.5~~ **11**	0	0	6	~~6~~ **7**	2	
Business District Street- 2 Lanes with Parking on Both Sides	2005.02	70'	2	7	7	8	0	11	0	0	0	11	0	8	7	7	2	
Business District Street-4 Lanes with Parking	2005.03	100'	2	10	~~8~~ **10**	8	0	~~11~~ **10**	~~11~~ **10**	**0**	~~11~~ **10**	~~11~~ **10**	0	8	~~8~~ **10**	10	2	
Divided Business District Street, 4 Lanes with Parking	2005.04	112'	2	~~7~~ **10**	~~7~~ **6**	8	0	~~11~~ **10**	~~12.5~~ **11**	~~17~~ **18**	~~12.5~~ **11**	~~11~~ **10**	0	8	~~7~~ **6**	~~7~~ **10**	2	

Notes: 1.Raised Median, no left turn lanes

ROADWAY TYPE	STD. NO.	ROW	MAINTENANCE OFFSET	SIDEWALK WIDTH	BUFFER WIDTH	PARKING LANE WIDTH	BIKE LANE/SHOULDER	OUTSIDE LANE WIDTH	INSIDE LANE WIDTH	MEDIAN /CENTER LANE WIDTH	INSIDE LANE WIDTH	OUTSIDE LANE WIDTH	BIKE LANE/SHOULDER	PARKING LANE WIDTH	BUFFER WIDTH	SIDEWALK WIDTH	MAINTENANCE OFFSET	NOTES
Industrial Street-2 Lanes	2006.01	60'	2	5	8.5	0	0	14.5	0	0	0	14.5	0	0	8.5	5	2	
Industrial Street-3 Lanes	2006.02	70'	2	5	~~6.5~~ **8**	0	0	14.5	0	~~14~~ **11**	0	14.5	0	0	~~6.5~~ **8**	5	2	1
Industrial Street-4 Lanes	2006.03	80'	2	5	6.5	0	0	14.5	12	0	12	14.5	0	0	6.5	5	2	
Divided Industrial Street- 4 Lanes	2006.04	100'	2	5	~~6.5~~ **6**	0	0	14.5	13.5	~~17~~ **18**	13.5	14.5	0	0	~~6.5~~ **6**	5	2	2

Notes: 1. Median is two way left turn lane
2. Raised median

Urban Parkway	2007.01	120'	2	10	17	0	0	~~12.5~~ **12**	~~12.5~~ **12**	~~17~~ **18**	~~12.5~~ **12**	~~12.5~~ **12**	0	0	~~16~~ 17	6	2	
Suburban Parkway	2007.02	150'	7	10	24	0	6	11	~~12.5~~ **12**	~~17~~ **18**	~~12.5~~ **12**	11	6	0	25	6	2	
Rural Parkway	2007.03	150'	2	10	20	0	8	12	12	32	12	12	8	0	20	0	2	1

Notes: 1. A 5' sidewalk can be provided by reducing the median to 27'

Roadway Type	Std. No.	ROW	Maintenance Offset	Sidewalk Width	Buffer Width	Parking Lane Width	Bike Lane/Shoulder	Outside Lane Width	Middle Lane Width	Inside Lane Width	Median /Center Lane Width	Inside Lane Width	Middle Lane Width	Outside Lane Width	Bike Lane/Shoulder	Parking Lane Width	Buffer Width	Sidewalk Width	Maintenance Offset	Notes
Urban Major Highway- 6 Lanes	2008.01	120'	2	~~6~~ **7**	6	0	0	14	~~11~~ **10.5**	~~12.5~~ **11.5**	~~17~~ **18**	~~12.5~~ **11.5**	~~11~~ **10.5**	14	0	0	6	~~6~~ **7**	2	
Urban Major Highway- 6 Lanes, With Bike Lanes	2008.02	150'	2	~~8~~ **10**	~~16~~ **8**	0	~~6~~ **5.5**	~~11~~ **10.5**	~~11~~ **10.5**	~~12.5~~ **11.5**	~~17~~ **34**	~~12.5~~ **11.5**	~~11~~ **10.5**	~~11~~ **10.5**	~~6~~ **5.5**	0	~~16~~ **8**	~~8~~ **10**	2	
Suburban Major Highway- 6 Lanes, With Bike Lanes	2008.04	150'	2	8	~~19~~ **15.5**	0	6	11	11	12.5	~~17~~ **18**	12.5	11	11	6	0	~~19~~ **15.5**	~~5~~ **8**	2	
Rural Major Highway- 6 Lanes, Open Section	2008.05	150'	2	5	22.5	0	8	12	0	13.5	24	13.5	0	12	8	0	22.5	0	7	1

Notes: 1. To provide sidewalk on both sides, adjust the Maintenance Offset

Roadway Type	Std. No.	ROW	Maintenance Offset	Sidewalk Width	Buffer Width	Parking Lane Width	Bike Lane/Shoulder	Outside Lane Width	Middle Lane Width	Inside Lane Width	Median /Center Lane Width	Inside Lane Width	Middle Lane Width	Outside Lane Width	Bike Lane/Shoulder	Parking Lane Width	Buffer Width	Sidewalk Width	Maintenance Offset	Notes
Urban Controlled Major Highway-6 Lanes, Speeds <45 mph	2008.07	150'	2	10	14.5	0	0	13.5	12	13.5	24	13.5	12	13.5	0	0	14.5	5	2	
Urban Controlled Major Highway-6 Lanes, Speeds ≥45 mph	2008.08	150'	2	10	13	0	8	12	12	12	17	12	12	12	8	0	13	5	2	
Suburban Controlled Major Highway-6 Lanes, Speeds <45 mph	2008.09	150'	2	10	19	0	0	13.5	12	13.5	24	13.5	12	13.5	0	0	7	5	5	
Suburban Controlled Major Highway-6 Lanes, Speeds ≥45 mph	2008.10	150'	5	10	10	0	8	12	12	12	17	12	12	12	8	0	10	5	5	

Roadway Type	Std. No.	ROW	Maintenance Offset	Sidewalk Width	Buffer Width	Parking Lane	Bike Lane/Shoulder	Outside Lane Width	Inside Lane Width	Median /Center Lane Width	Inside Lane Width	Outside Lane Width	Bike Lane/Shoulder	Parking Lane Width	Buffer Width	Sidewalk Width	Maintenance Offset	Notes	Roadway Type	Std. No.
Suburban Controlled Major Highway- 6 Lanes, Open Section	2008.11	150'	2	10	21.5	0	8	12	0	12	24	12	0	12	8	0	21.5	5	2	
Rural Controlled Major Highway- 6 Lanes, Open Section	2008.12	150'	2	10	20	0	8	12	0	12	32	12	0	12	8	0	20	0	1	

2007 Road Code Bill – Design Elements Table

Classification	Target Speed	Road/Lane Width	Curbside Width[6]	Bike Lane Width[2]	Sidewalk Width[8]
Freeway	55-65 mph	12' lanes	Variable	none	none
Controlled Major Highway[1]	50 mph	12' lanes	Variable	5'	5'
Parkway[1]	urban: 25 mph	11' lanes	25'	none	none
	suburban: 40 mph				
Major Highway[1, 3]	urban: 25 mph	urban: 10.5' lanes	urban: 10' min.	5'	urban: 15' min.
	suburban: 35-40 mph	suburban: 11' lanes	elsewhere: 15'		elsewhere: 5'
	rural: 45 mph[7]	rural: 12' lanes			
Country Arterial[4]	suburban: 40 mph	11' lanes		4'	suburban: 5'
	rural: 40-45 mph[7]				rural: none
Arterial[1, 4]	urban: 25 mph	urban: 10' lanes	urban: 15' min.	urban: 4'	urban: 10' min.
	suburban: 35 mph	suburban: 11' lanes	elsewhere: 15'	suburban: 4'	elsewhere: 5'
	rural: 40 mph[7]	rural: 12' lanes		rural: 5'	
Minor Arterial[1, 4]	urban: 25 mph	urban: 10' lanes	urban: 15' min.	4'	5'
	suburban: 30 mph	suburban: 10.5' lanes	elsewhere: 15'		
	rural: 35 mph[7]	rural: 11' lanes			
Business District Street[1]	25 mph	urban: 10' lanes	urban: 15' min.	none	10'
		elsewhere: 11' lanes	elsewhere: 15'		
Industrial Street[1]	25 mph	urban: 10' lanes	urban: 15' min.	none	5'

ATTACHMENT 3

		elsewhere: 11' lanes	elsewhere: 15'		
Country Road	25 mph	20' road		none	suburban: 5'
					rural: none
Primary and Principal Secondary Residential Streets	25 mph		15'	3'	5'
(no curbs or parking)		20' road			
(w/curbs, no parking)[5]		22' road			
(w/curbs, 1-side parking)[5]		28' road			
(w/curbs, 2-side parking)[5]		34' road			
Secondary Residential Streets	20 mph		15'	none	4'
(no curbs or parking)		20' road			
(w/curbs, no parking)		20' road			
(w/curbs, 1-side parking)		20' road			
(w/curbs, 2-side parking)		24' road			
Tertiary Residential Street	20 mph	20' road	12'	none	4'
Alley	15 mph	urban (2-way): 20' road	none	none	none
		urban (1-way): 16' road			
		suburban: 16' road			

[1] Add 1 foot of width to each lane abutting an outside curb. Except in urban areas, add another 2 feet of width to each lane abutting an outside curb if a shared-use roadway is consistent

with the Countywide Bikeways Functional Master Plan or the applicable area master or sector plan.

[2] Bike lanes must be included when a road is constructed or reconstructed if bike lanes are consistent with the Countywide Bikeways Functional Master Plan or the applicable area master or sector plan. This bike lane width replaces the added width under note (1).

[3] For an open-section Controlled Major Highway, Major Highway or Country Arterial add 5 feet of width on each road edge for a paved shoulder. A bike lane replaces this additional width.

[4] For an open-section Arterial or Minor Arterial add 4 feet of width beyond the edge of the outside lane for a paved shoulder. If a bike lane is provided on a road edge, the bike lane replaces this additional width.

[5] For a Primary or Principal Secondary Residential Street, the total curb-to-curb width must be the sum of the road width and any master-planned bike lane widths.

[6] Curbside width is the area beyond each curb necessary for sidewalks, shared use paths, street trees and other landscaping, streetlights, utilities, and other elements. For an open section road or street, the area beyond the shoulder is shown in the design standards adopted under Chapter 49.

[7] Target speed for these classifications in suburban and rural commercial zones is 30 mph.

[8] Sidewalks are required on both sides of any road or street, as indicated on this table, except Secondary and Tertiary Residential Streets, where the Planning Board may require a sidewalk on either or both sides of a street, depending on the area's housing density and the potential uses of the sidewalks. An alley must not have any sidewalks.

[9] Trees may be planted in a median if the design speed of the road does not exceed 40 miles per hour. The median must be at least:

(1) 8 feet wide to accommodate trees that will grow to no more than a 4-inch diameter at maturity; and

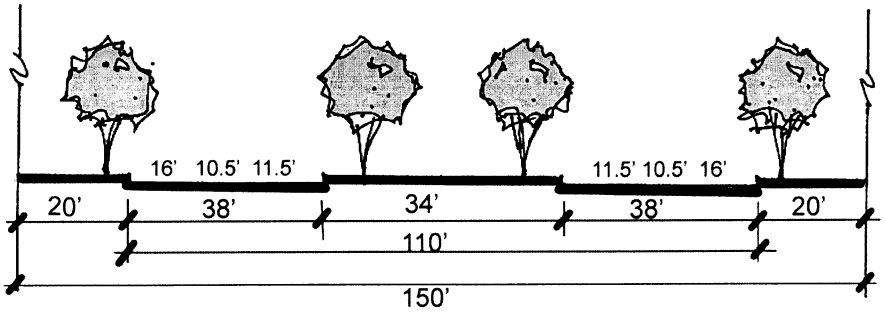
(2) 12 feet wide to accommodate any tree that will grow larger than a 4-inch diameter at maturity.

[10] A landscape panel abutting a closed-section road must extend at least 5 feet from the curb and be at least 8 feet long. Trees planted in landscape panels along 'urban roads must be at least 30 feet apart unless the tree spacing is interrupted by a public street or driveway.

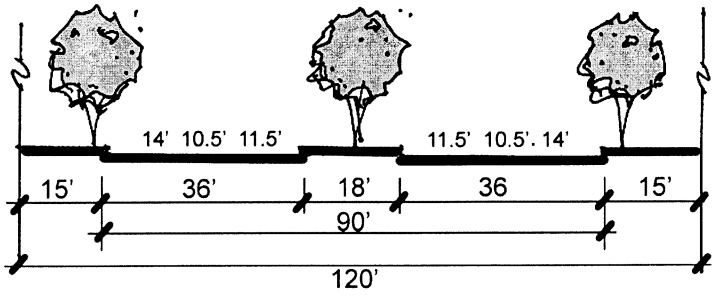
[11] Each newly built or reconstructed street must retain or filter the following amounts of stormwater on-site during a 24- hour period: ½-1" in an 'urban area; at least 2" in a 'suburban area; and at least 3" in a 'rural area.

Proposed Cross Sections for Urban Areas

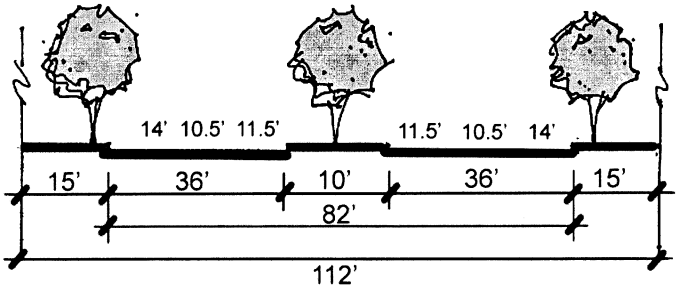
150 FT ROW
Major Highway
6 lanes divided
(4 lanes w/
non peak hour parking)
Urban Boulevard



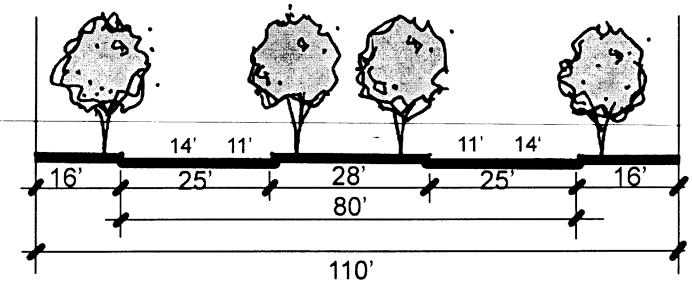
120 FT ROW
Major Highway
6 lanes divided
(4 lanes w/
non peak hour parking)
Urban Boulevard



112 FT ROW
Major Highway
6 lanes divided
(4 lanes w/
non peak hour parking)
Urban Boulevard



110 FT ROW
Arterial
4 lanes divided
(2 lanes w/
non peak hour parking)
Urban Boulevards

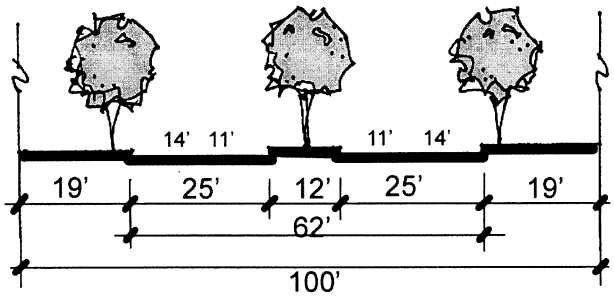


Note: Retrofiting existing streets with new standards will require custom fit cross sections, a kit of parts approach to achieve context sensitive solutions.

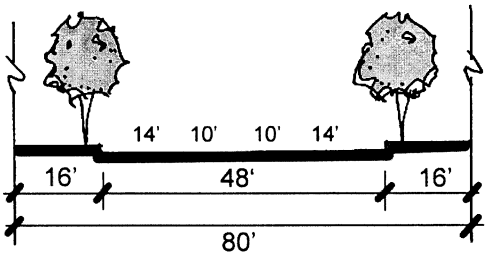
ATTACHMENT 4

Proposed Cross Sections for Urban Areas

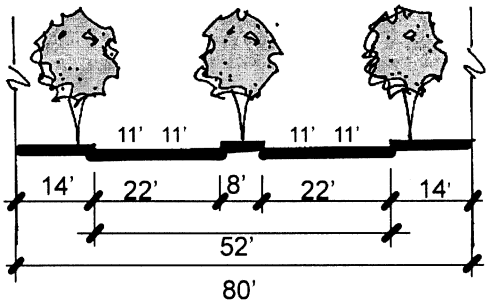
100 FT ROW
Arterial/Commercial Business
4 lanes divided
(2 lanes w/
non peak hour parking)
Main Street



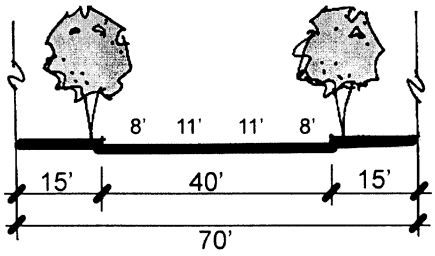
80 FT ROW
Arterial/Commercial Business
4 lanes
(2 lanes w/
non peak hour parking)
Main Street



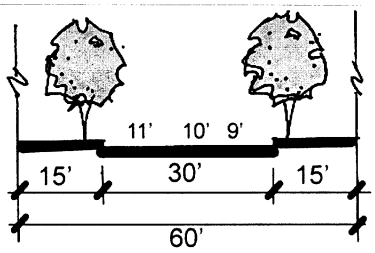
80 FT ROW
Commercial Business
4 lanes divided
(2 lanes w/
non peak hour parking)
Main Street



70 FT ROW
Commercial Business
2 lanes
2 parking lanes
Main Street



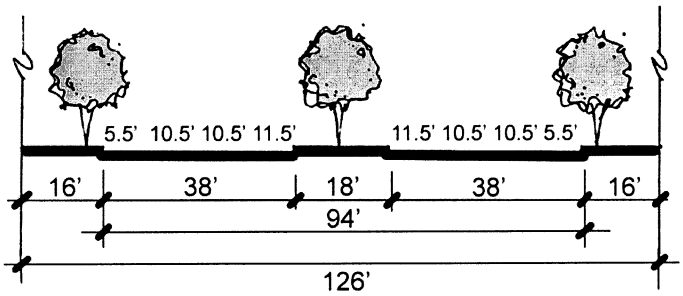
60 FT ROW
Commercial Business
2 lanes
1 parking lane



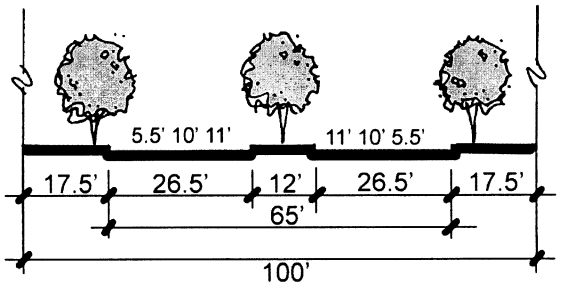
Note: Retrofiting existing streets with new standards will require custom fit cross sections, a kit of parts approach to achieve context sensitive solutions.

Proposed Cross Sections that include Bike Lanes in Urban Areas

126 FT ROW
Major Highway
6 lanes divided
Median with designated turn lane
5.5 bike lanes
Urban Boulevard

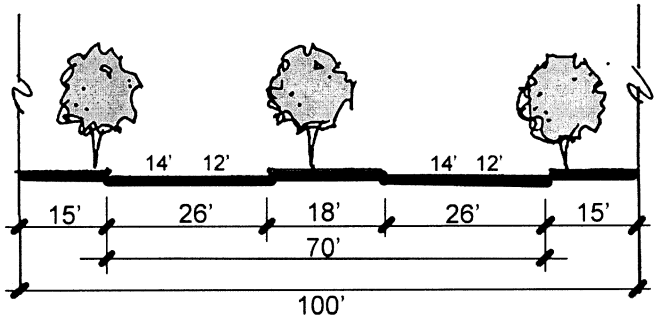


100 FT ROW
Arterial/Commercial Business
4 lanes divided
Median without designated turn lane
5.5 foot bike lanes
Main Street

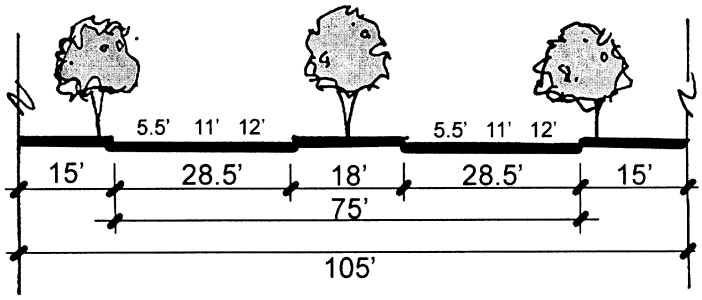


Proposed Cross Sections for Suburban and Rural Areas

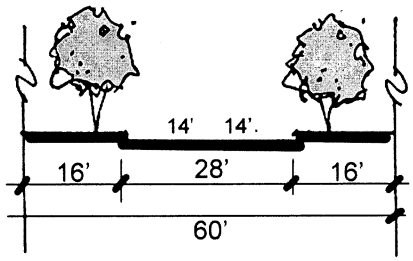
100 FT ROW
Major Highway
4 lanes with median



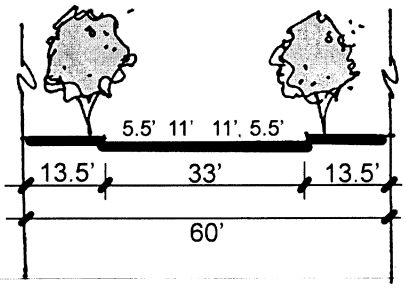
105 FT ROW
Major Highway
4 lanes with median
and bike lanes



60 FT ROW
Arterial
2 lanes

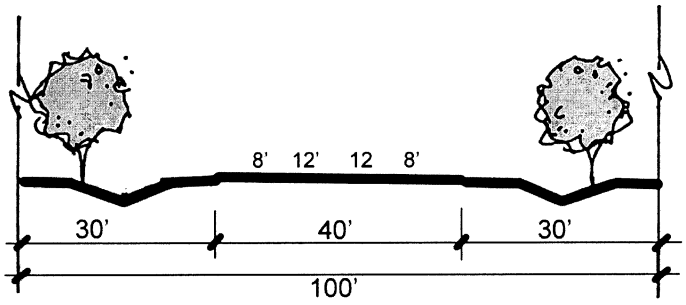


60 FT ROW
Arterial
2 lanes with bike lanes

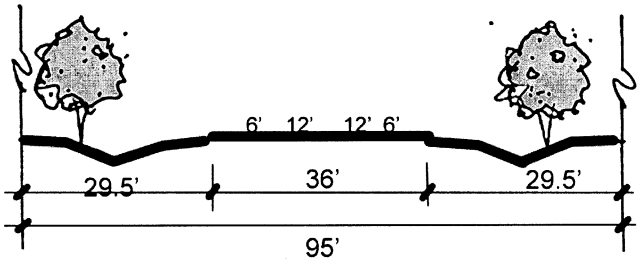


Proposed Cross Sections for Suburban and Rural Open Section Roadways

100 FT ROW
Major Highway
2 lanes with swales, sidewalks

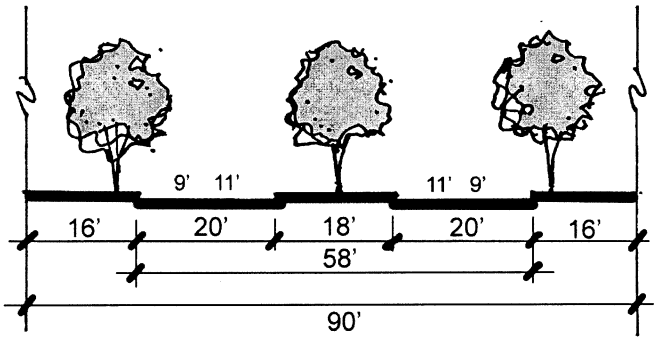


95 FT ROW
Arterial
2 lanes with swales, sidewalks

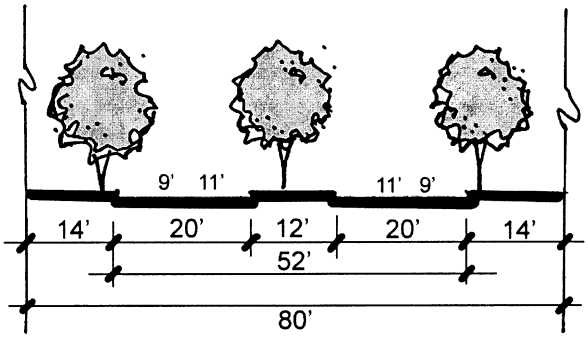


Proposed Cross Sections for Residential Streets with a Median

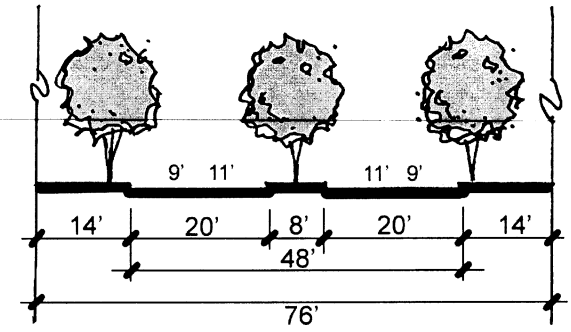
90 FT ROW
Primary Residential Divided
2 lanes with median
designated turn lane
parking permitted both sides



80 FT ROW
Primary Residential Divided
2 lanes with median,
no designated turn lane
parking permitted both sides



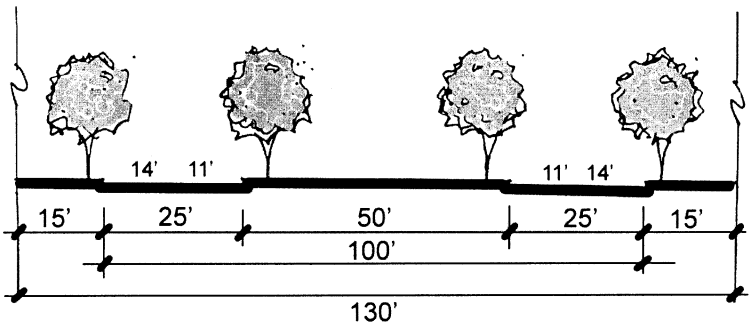
76 FT ROW
Secondary Residential Divided
2 lanes with median
no designated turn lane
parking permitted both sides



Proposed Transitways

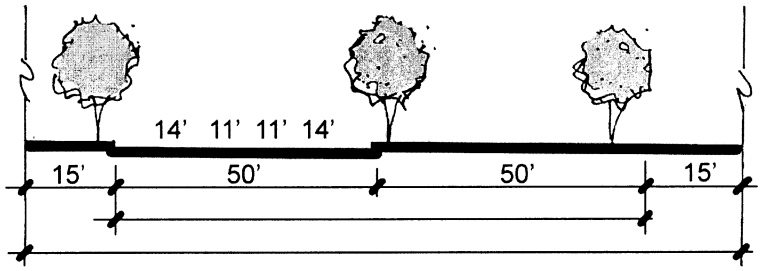
130 FT ROW Transitway

4 lanes divided
Transit centered in median



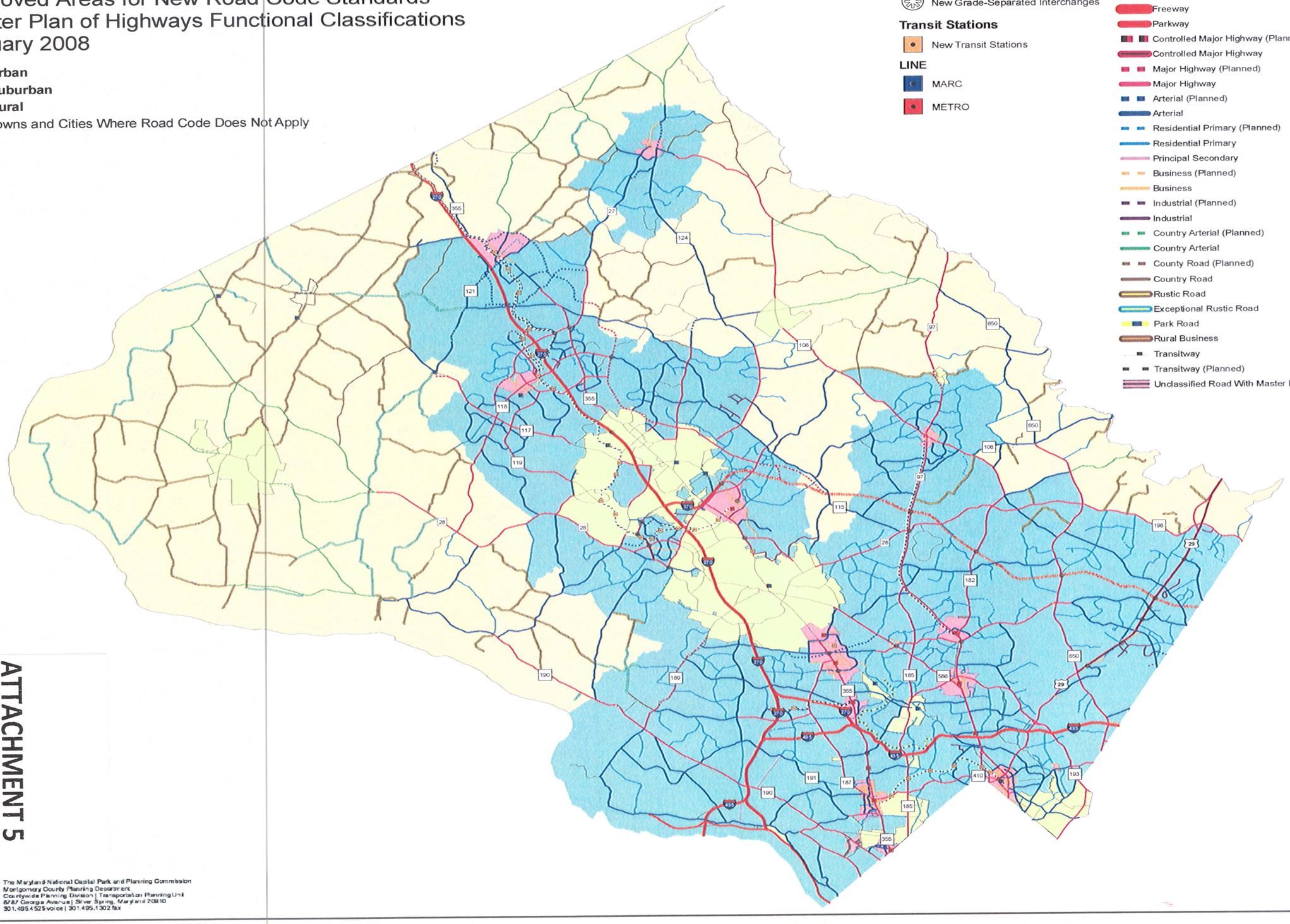
130 FT ROW Transitway

4 lanes undivided
Transit off set



Approved Areas for New Road Code Standards
Master Plan of Highways Functional Classifications
January 2008

Urban
Suburban
Rural
Towns and Cities Where Road Code Does Not Apply



New Grade-Separated Interchanges

Transit Stations
New Transit Stations

LINE
MARC
METRO

Freeway (Planned)
Freeway
Parkway
Controlled Major Highway (Planned)
Controlled Major Highway
Major Highway (Planned)
Major Highway
Arterial (Planned)
Arterial
Residential Primary (Planned)
Residential Primary
Principal Secondary
Business (Planned)
Business
Industrial (Planned)
Industrial
Country Arterial (Planned)
Country Arterial
County Road (Planned)
Country Road
Rustic Road
Exceptional Rustic Road
Park Road
Rural Business
Transitway
Transitway (Planned)
Unclassified Road With Master Plan Defined Right of Way

N

0 5,000 Feet
1 inch equals 4 miles

ATTACHMENT 5

The Maryland-National Capital Park and Planning Commission
Montgomery County Planning Department
Countywide Planning Division | Transportation Planning Unit
8787 Georgia Avenue | Silver Spring, Maryland 20910
301.495.4525 voice | 301.495.1302 fax

Comparison of Target Speeds in 2007 Road Code Bill vs. Executive's Proposed Target Speeds

Classification	Area Type	Target Speed in Road Code Bill	Target Speed in Proposed Regulations	Difference (Proposed speed minus speed in bill)	Trend
Freeway	All	55-65 mph	Refer to AASHTO guidelines	none	→
Controlled Major Highway*	urban	50 mph	40-50 mph	up to 10 mph less	↓
	suburban	50 mph	40-55 mph	between 10 mph less and 5 mph higher	↓
	rural	50 mph	45-55 mph	between 5 mph less and 5 mph higher	→
Parkway	urban	25 mph	30-40 mph	5-15 mph higher	↑
	suburban	40 mph	30-45 mph	between 10 mph less and 5 mph higher	↓
	rural	none specified	45-55 mph	none originally specified	→
Major Highway	urban	25 mph	30-40 mph	5-15 mph higher	↑
	suburban	35-40 mph	30-50 mph	between 5 mph less and 10 mph higher	↑
	rural commercial zones	30 mph	45-55 mph	15-25 mph higher	↑

	other rural	45 mph	45-55 mph	up to 10 mph higher	↑
Country Arterial	suburban	40 mph	35-50 mph	between 5 mph less and 10 mph higher	↑
	rural commercial zones	30 mph	35-50 mph	5-20 mph higher	↑
	other rural	40-45 mph	35-50 mph	between 5 mph less and 5 mph higher	→
Arterial	urban	25 mph	30-35 mph	5-10 mph higher	↑
	suburban	35 mph	30-40 mph	between 5 mph less and 5 mph higher	→
	rural commercial zones	30 mph	35-50 mph	5-15 mph higher	↑
	other rural	40 mph	35-50 mph	between 5 mph less and 10 mph higher	↑
Minor Arterial	urban	25 mph	30-35 mph	5-10 mph higher	↑
	suburban	30 mph	30-35 mph	up to 5 mph higher	↑
	rural commercial zones	30 mph	35-50 mph	5-15 mph higher	↑
	other rural	35 mph	35-50 mph	up to 15 mph higher	↑
Business District Street	urban	25 mph	25-30 mph	up to 5 mph higher	↑
	suburban and rural	25 mph	25-35 mph	up to 10 mph higher	↑

Industrial Street	all	25 mph	30-40 mph	5-15 mph higher	↑
Country Road	suburban and rural	25 mph	25-40 mph	up to 15 mph higher	↑
Primary and Principal Secondary Residential Streets	all	25 mph	30 mph geometric criteria, min. 30 mph sight distance	5 mph higher, but no change from existing	↑
Secondary Residential Streets	all	20 mph	20 mph geometric criteria, min. 25 mph sight distance	no change from existing	→
Tertiary Residential Street	all	20 mph	20 mph geometric criteria, min. 25 mph sight distance	no change from existing	→
Alley	all	15 mph	none specified	no change from existing	→

* No roads in urban areas are currently classified as Major Highways.

Maryland Vehicle Law and statutory speeds

- MD Vehicle Law (MVL) is the primary document governing travel speeds in Montgomery County. The law sets default speed limits for each road depending on the adjacent land use and level of development (statutory speed). Alteration of the default speed limits is permitted within specified limits if the statutory speed is determined to be greater or less than reasonable or safe.

  The maximum speed limits are:

  (1) 30 miles an hour on all highways in a business district (*defined as an area that adjoins and includes a highway where at least 50 percent of the frontage along the highway, for a distance of at least 300 feet, is occupied by buildings used for business.)*; and on undivided highways in a residential district *(defined as an area where the property along the highway, for a distance of at least 300 feet, is improved mainly with residences or residences and buildings used for business.)*;

  (2) 35 miles an hour on divided highways in a residential district;

  (3) 50 miles an hour on undivided highways in other locations; and

  (4) 55 miles an hour on divided highways in other locations.

- The MD Manual on Uniform Traffic Control Devices (MUTCD) states that, *"Optimum traffic safety requires that speed limits be safe, reasonable, and realistic."* but that roads should be posted at the speed where *"the motorist comfort level is acknowledged."* The workgroup's goal was to create standards to engineer new and reconstructed roads to operate at a specific target speed . If roads are successfully designed to achieve the recommended target speed, the motorist will be comfortable with having the posted speed limit be the same as the target speed. (This goal was acknowledged in Councilmember Floreen's press release for the adoption of the Road Code bill; Ms. Floreen was the initiator of this Road Code effort.)

- The MD MUTCD states, *"On state highways and other arterial and major highways, including all through streets, if a speed limit other than one specified in Section 21-801.1(b) of the MVL is established, such a speed limit shall be established based on an engineering and traffic investigation as prescribed by Sections 21-802 and 21-803 of the MVL."*

  Section 21-803 states, *"If, on the basis of an engineering and traffic investigation, a local authority determines that any maximum speed limit specified in this subtitle is greater or*

less than reasonable or safe under ***existing*** (our emphasis added) *conditions on any part of a highway in its jurisdiction, it may establish a reasonable and safe maximum speed limit for that part of the highway, which may"*

(1) Decrease the limit at an intersection;

(2) Increase the limit to not more than 50 miles an hour in an urban district *(defined as an area that adjoins and includes any street; and is built up with structures that are devoted to business, industry, or dwelling houses; and situated at intervals of less than 100 feet, for a distance of at least a quarter of a mile);*

(3) Decrease the limit in an urban district;

(4) Decrease the limit outside an urban district to not less than 25 miles an hour; or

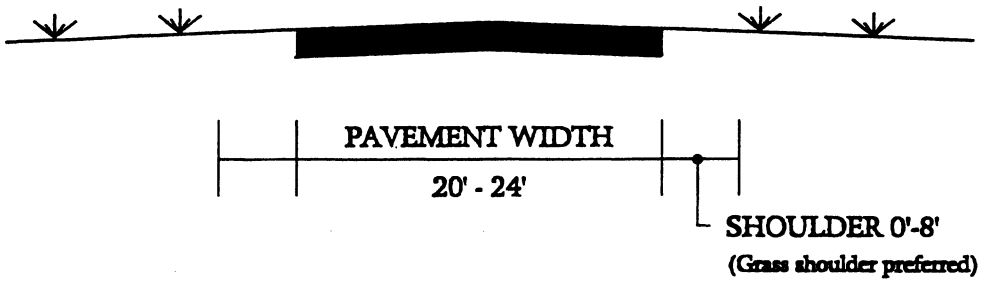
(5) Decrease the limit in a posted school zone to 15 miles an hour.

We believe that the allowance to alter a speed limit was intended to apply only to existing roads. While the law does not require a specific design process, the default statutory speed should be considered first before using any higher speed.

The above discussion of the statutory speed does not support the higher target speeds the Executive is recommending and was not included in the proposed regulations. However, MD Vehicle Law remains the legal basis for the operation of our roadways and the designers of the County's roadways would be handicapped by the lack of this information. ***We recommend that a reference to the statutory default speeds and allowable alterations be included in the Target Speed standard, and that a discussion of how this information should be applied be included in the Introduction and Application document.***

Suggested Design Features*

Figure 84

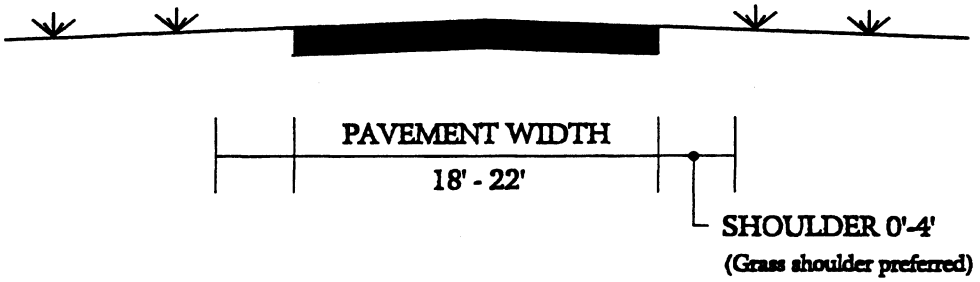


COUNTRY ARTERIAL

NOTES:

1) Width determined by design speed and traffic volume.

2) Drainage facilities to be constructed only if sheet flow creates problems and then to be custom designed to blend into countryside; infiltration should be first choice.



COUNTRY ROAD

NOTES:

1) Width determined by design speed and traffic volume.

2) Drainage facilities to be constructed only if sheet flow creates problems and then to be custom designed to blend into countryside; infiltration should be first choice.

M-NCPPC

* *From AASHTO Policy on Roadway Design 1984.*

ATTACHMENT 8