

## APPENDIX B

### Rationale for the Spacing Standards

The spacing standards are based on a variety of criterion. The values are rounded where necessary to give consistent and appropriate changes from one speed category to the next. The criteria that limit are shown in the table below.

**Table 1. Rationale for Access Management Spacing Standards for Statewide Other and Limited Access Highways**

Posted Speed	Rural		Urban		UBA STA
	Limited Access	Other	Limited Access	Other	
≥55	At-grade intersection spacing <sup>1</sup>	Desirable function distance <sup>2</sup> & DSD/SPD <sup>3</sup>	At-grade intersection spacing <sup>1</sup>	Desirable function distance <sup>2</sup> & DSD/SPD Urban <sup>4</sup>	
50	At-grade intersection spacing <sup>1</sup>	Desirable function distance & DSD/SPD	At-grade intersection spacing <sup>1</sup>	Desirable function distance & DSD/SPD Urban	
40 & 45	At-grade intersection spacing <sup>1</sup>	Desirable function distance & DSD/SPD Urban	At-grade intersection spacing <sup>1</sup>	DSD/SPD Urban	
30 & 35		DSD/SPD Urban		DSD/SPD Urban	DSD/SPD Urban
≤25		DSD/SPD Urban		DSD/SPD Urban	DSD/SPD Urban

<sup>1</sup> At-grade intersection spacing — the spacing between intersections is limiting.

<sup>2</sup> Desirable function intersection distance — the desirable functional intersection distance based on a deceleration rate of 6 ft/sec<sup>2</sup>.

<sup>3</sup> DSD/SPD — the decision sight distance for a speed path or direction change.

<sup>4</sup> DSD/SPD Urban — the decision sight distance for a speed path or direction change in urban areas has longer perception-reaction time.

**Table 2. Rationale for Access Management Spacing Standards for Regional Highways**

Posted Speed	Rural		Urban		UBA STA
	Expressway	Other	Expressway	Other	
≥55	At-grade intersection spacing <sup>1</sup>	Comfort. SSD <sup>2</sup>	At-grade intersection spacing	Comfort. SSD <sup>2</sup>	
50	At-grade intersection spacing	DSD/Stop Urban <sup>3</sup>	At-grade intersection spacing	DSD/Stop Urban <sup>3</sup>	
40 & 45	At-grade intersection spacing	DSD/Stop Urban	At-grade intersection spacing	DSD/Stop Urban	
30 & 35		DSD/Stop Urban		DSD/Stop Urban	Comfort. SSD <sup>4</sup> w/ 3 <sup>s</sup> PIEV
≤25		DSD/Stop Urban		DSD/Stop Urban	Comfort. SSD w/3 <sup>s</sup> PIEV

<sup>1</sup> At-grade intersection spacing — the spacing between intersections controls.

<sup>2</sup> Comfort. SSD — the comfortable stopping sight distance uses a 6 ft/sec<sup>2</sup> deceleration rate instead of the coefficient of friction for a poor, wet pavement.

<sup>3</sup> DSD/Stop Urban — the decision sight distance for a stop condition in an urban environment where complexity is greater and consequently perception-reaction times are longer.

<sup>4</sup> Comfort. SSD w/3<sup>s</sup> PIEV — comfortable stopping sight distance with a deceleration rate of 6 ft/sec<sup>2</sup> and a perception-reaction increased to 3<sup>s</sup> for urban complex conditions.

**Table 3. Rationale for Access Management Spacing Standards for District Highways**

Posted Speed	Rural		Urban		UBA STA
	Expressway	Other	Expressway	Other	
≥55	At-grade intersection spacing <sup>1</sup>	DSD/Stop <sup>2</sup> & SSD AASHTO <sup>3</sup>	At-grade intersection spacing <sup>1</sup>	DSD / Stop <sup>2</sup>	
50	At-grade intersection spacing	DSD/Stop	At-grade intersection spacing	DSD/Stop	
40 & 45	At-grade intersection spacing	DSD/Stop	At-grade intersection spacing	DSD/Stop	
30 & 35		DSD/Stop & comfort SSD <sup>4</sup>		DSD/Stop & comfort SSD <sup>4</sup>	Typical block minimum <sup>5</sup>
≤25		DSD/Stop & comfort SSD		DSD/Stop & comfort SSD	Typical block minimum

<sup>1</sup> At-grade intersection spacing — the spacing between intersections controls.

<sup>2</sup> DSD/Stop Urban — the decision sight distance to a stop in a rural environment with less perception-reaction time than in urban areas.

<sup>3</sup> SSD AASHTO — the desirable stopping sight distance based on AASHTO criteria of 2.5<sup>s</sup> perception-reaction time and functional resistance for a poor, wet pavement.

<sup>4</sup> Comfort. SSD — the comfortable stopping sight distance uses a 6 ft/sec<sup>2</sup> deceleration rate instead of the coefficient of friction for a poor, wet pavement.

<sup>5</sup> Typical block minimum — the typical minimum block length found in urban areas.

**Table 4. Rationale for Access Spacing Minor Deviations for Statewide Highways**

Posted Speed	Rural		Urban		UBA STA
	Expressway	Other	Expressway	Other	
≥55	None	Comfort. SSD <sup>1</sup>	None	Comfort. SSD <sup>1</sup>	
	None	DSD/SPD Urban <sup>2</sup>	None	DSD/Stop Urban <sup>2</sup>	
50	None	Comfort. SSD	None	Comfort. SSD	
	None	DSD/SPD Urban	None	DSD/Stop Urban	
40 & 45	None	Comfort. SSD	None	Comfort. SSD	
	None	DSD/SPD Urban	None	DSD/Stop Urban	
30 & 35		Comfort. SSD		Comfort. SSD	Comfort. SSD
		DSD/SPD Urban		DSD/Stop Urban	DSD/Stop Urban
≤25		Comfort. SSD		Comfort. SSD	Comfort. SSD
		DSD/SPD Urban		DSD/Stop Urban	DSD/Stop Urban

<sup>1</sup> Comfort. SSD — the comfortable stopping sight distance uses a 6 ft/sec<sup>2</sup> deceleration rate instead of the coefficient of friction for a poor, wet pavement.

<sup>2</sup> DSD/SPD Urban — decision sight distance for a speed, path or direction change where the perception-reaction is increased, recognizing the higher complexity of conditions.

**Table 5. Rationale for Access Spacing Minor Deviations for Regional Highways**

Posted Speed	Rural		Urban		UBA STA
	Expressway	Other	Expressway	Other	
≥55	None	SSD AASHTO w/ 3 <sup>s</sup> PIEV <sup>1</sup>	None	SSD AASHTO w/ 3 <sup>s</sup> PIEV <sup>1</sup>	
	None	Comfort. SSD <sup>2</sup>	None	Comfort. SSD <sup>2</sup>	
50	None	SSD AASHTO w/ 3 <sup>s</sup> PIEV	None	SSD AASHTO w/ 3 <sup>s</sup> PIEV	
	None	Comfort. SSD	None	Comfort. SSD	
40 & 45	None	SSD AASHTO w/ 3 <sup>s</sup> PIEV	None	SSD AASHTO w/ 3 <sup>s</sup> PIEV	
	None	Comfort. SSD	None	Comfort. SSD	
30 & 35		SSD AASHTO w/ 3 <sup>s</sup> PIEV		SSD AASHTO w/ 3 <sup>s</sup> PIEV	SSD AASHTO w/ 3 <sup>s</sup> PIEV
		Comfort. SSD		Comfort. SSD	Comfort. SSD
≤25		SSD AASHTO w/ 3 <sup>s</sup> PIEV		SSD AASHTO w/ 3 <sup>s</sup> PIEV	SSD AASHTO w/ 3 <sup>s</sup> PIEV
				Comfort. SSD	Comfort. SSD

<sup>1</sup> SSD AASHTO w/ 3<sup>s</sup> PIEV — the desirable stopping sight distance based on AASHTO criteria with the perception-reaction time increased to 3<sup>s</sup> for urban and developed conditions.

<sup>2</sup> Comfort. SSD — the comfortable stopping sight distance uses a 6 ft/sec<sup>2</sup> deceleration rate instead of the coefficient of friction for a poor, wet pavement.

**Table 6. Rationale for Access Spacing Minor Deviations for District Highways**

Posted Speed	Rural		Urban		UBA STA
	Expressway	Other	Expressway	Other	
≥55	None	SSD AASHTO <sup>1</sup>	None	SSD AASHTO	
	None	SSD AASHTO*	None	SSD AASHTO*	
50	None	SSD AASHTO	None	SSD AASHTO	
	None	SSD AASHTO*	None	SSD AASHTO*	
40 & 45	None	SSD AASHTO	None	SSD AASHTO	
	None	SSD AASHTO w/ 3 <sup>s</sup> PIEV* <sup>2</sup>	None	SSD AASHTO w/ 3 <sup>s</sup> PIEV*	
30 & 35		SSD AASHTO w/ 3 <sup>s</sup> PIEV*		SSD AASHTO	
		SSD AASHTO w/ 3 <sup>s</sup> PIEV*		SSD AASHTO w/ 3 <sup>s</sup> PIEV	
≤25		SSD AASHTO w/ 3 <sup>s</sup> PIEV*		SSD AASHTO	
		SSD AASHTO w/ 3 <sup>s</sup> PIEV*		SSD AASHTO w/ 3 <sup>s</sup> PIEV	

\* Match Access Management Technical Committee Recommendation

<sup>1</sup> SSD AASHTO — the desirable stopping sight distance based on AASHTO criteria of 2.5<sup>s</sup> perception-reaction time and functional resistance for a poor, wet pavement.

<sup>2</sup> SSD AASHTO w/ 3<sup>s</sup> PIEV — the desirable stopping sight distance based on AASHTO criteria with the perception-reaction time increased to 3<sup>s</sup> for urban and developed conditions.