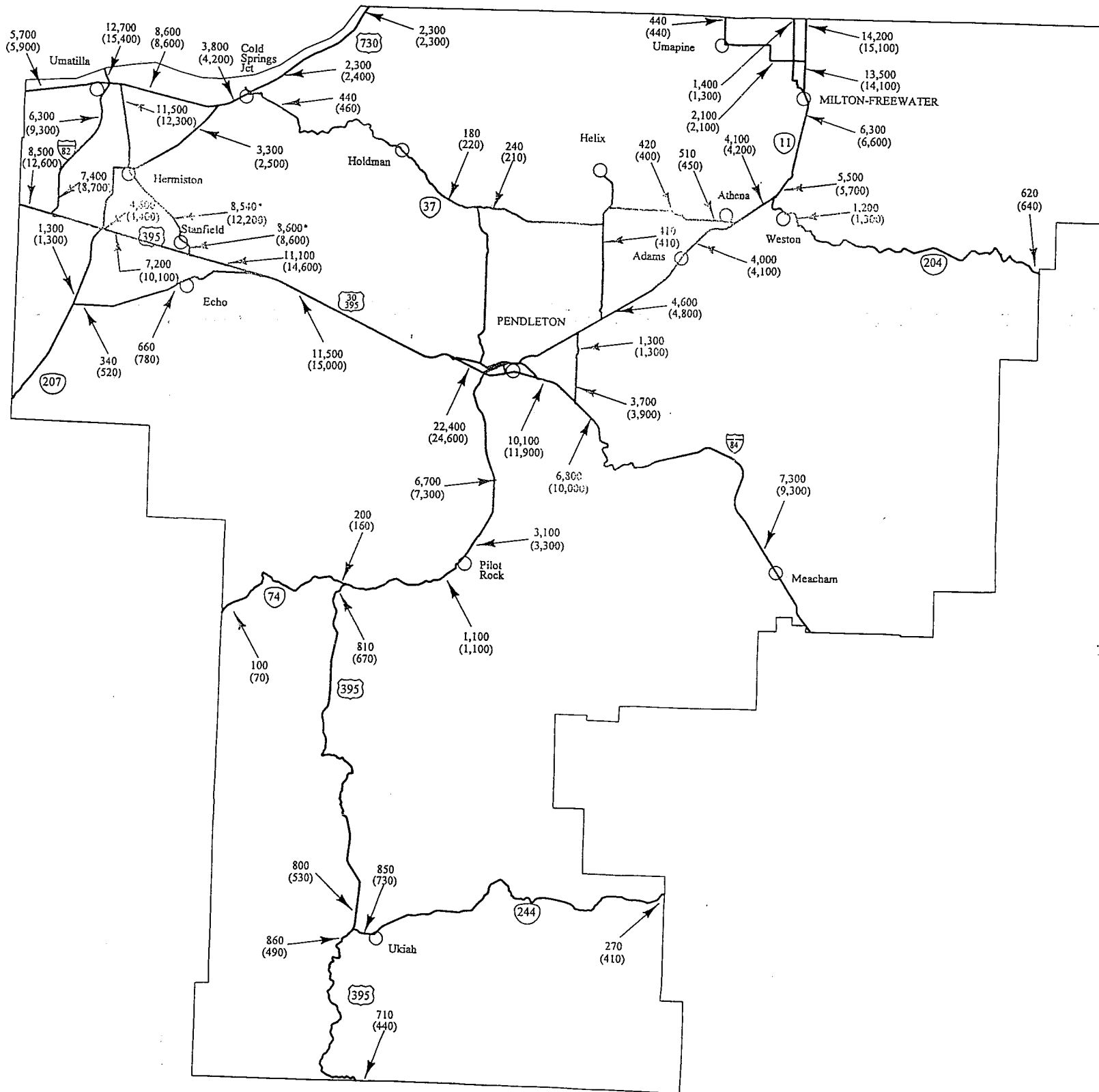




APPENDIX C
TRAFFIC VOLUMES ALONG COUNTY ROADS, US FOREST SERVICE ROADS, AND
BUREAU OF LAND MANAGEMENT ROADS

UMCO0001/UMAT_1.DGN/TNT/07-07-98




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 NORTH
 (NOT TO SCALE)

LEGEND:
 X,XXX = 1996 ADT VOLUMES
 X,XXX* = 1998 ADT VOLUMES
 (X,XXX) = 1999 ADT VOLUMES

FIGURE B-1
 Existing Average Daily
 Traffic Volumes
 -Umatilla County

US FOREST SERVICE ROADS

The US Forest Service currently has jurisdiction over 1,658 miles of differing types of roads in Umatilla County. Most of them are located in the Umatilla and Wallowa-Whitman National Forests and are made of gravel in the rural areas. The primary function of these roads is to provide access for logging trucks and recreational vehicles to all the different parts of the forest lands.

The Forest Service is not a public road agency; therefore, responsibilities and liabilities are not the same as those of the county and state. Road closures in some areas may be imminent with continuing reductions in federal budgets. Priority routes are determined by recreational and commercial uses.

Maintenance Levels

The Forest Service utilizes five different maintenance levels which are operational and objective in nature. These levels are identified as follows:

- Maintenance Level 1 – Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed one year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are “prohibit” and “eliminate.”
- Maintenance Level 2 – Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specified uses. Log haul may occur at this level. Appropriate traffic management strategies are either to (1) discourage or prohibit passenger cars or (2) accept or discourage high clearance vehicles.
- Maintenance Level 3 – Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either “encourage” or “accept”. “Discourage” or “prohibit” strategies may be employed for certain classes of vehicles or users.
- Maintenance Level 4 – Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated. The most appropriate traffic management strategy is “encourage”. However, the “prohibit” strategy may apply to specific classes of vehicles or users at certain times.
- Maintenance Level 5 – Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated. The appropriate traffic management strategy is “encourage.”

The distinction between Forest Service maintenance levels is not always sharply defined. Some parameters overlap two or more different maintenance levels. Maintenance levels are based on the best overall fit of the parameters for the road in question. In the situations where the parameters do not indicate a definite selection, the desired level of user comfort and convenience is used as the overriding criteria to determine the maintenance level. Forest Service road maintenance includes a variety of work activities. Activities may be either detailed and site specific, or broad and general.

Bureau of Land Management Roads

The Bureau of Land Management (BLM) has jurisdiction over 22 miles of roads within Umatilla County. This number includes eight miles of natural surface roads and seven miles of gravel roads. The seven miles of paved roadway, now abandoned, runs near the south fork of the Walla Walla River and was formerly used by Boise Cascade company for logging operations. The primary function of these roads is to provide access for logging and grazing on BLM lands. The BLM is not a public road agency; therefore, responsibilities and liabilities are not the same as those of the county and state. Road closures in some areas may be imminent with continuing reductions in federal budgets. Priority routes are determined by commercial uses. Currently, all BLM roads in Umatilla County are subject to an annual visual inspection. Maintenance is usually performed only in the case of washouts due to storms.

US Forest Service Roads

Traffic volumes on Forest Service roads are intermittent and can range from 0 to 100 vpd or more.

Bureau of Land Management Roads

Traffic volumes of BLM roads are very low, usually under 10 vpd. This number will increase when a log haul is in progress.

Appendix C:

Access Management Standards

Access Management Spacing Standards

The following tables show the access spacing standards for the access management classifications listed in Goal 3, Policy 3A: Classification and Spacing Criteria, Action 3A.1.

INTERCHANGE SPACING ^①		
Access Management Classification	Area	Interchange Spacing ^②
Interstate* and Non-Interstate Freeways (NHS)	Urban	3 miles (5 kilometers)
	Rural	6 miles (10 kilometers)
All Expressways on Statewide (NHS), Regional and District Highways	Urban	1.9 miles (3 kilometers)
	Rural	3 miles (5 kilometers)

Table 12: Interchange spacing

Notes for Table 12:

* Interstate interchange spacing must be in conformance with federal policy.

① The spacing standards in Table 12 are for planning and design of new interchanges on freeways or expressways. A major deviation study is required to change these standards, but the deviation should consider the spacing requirements in the Interchange Access Management Area Tables 16-19.

② Crossroad to crossroad centerline distance.

SPACING STANDARDS FOR STATEWIDE HIGHWAYS①②						
Posted Speed③	Rural		Urban			
	Expressway**	Other	Expressway**	Other	UBA	STA
≥55	5280	1320	2640	1320		
50	5280	1100	2640	1100		
40 & 45	5280	990	2640	990		
30 & 35		770		770	720	④
≤25		550		550	520	④

Table 13: Access management spacing standards for statewide highways
(measurement is in feet)*

Notes for Table 13:

Note: The numbers in circles (②) refer to explanatory notes that follow tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

SPACING STANDARDS FOR REGIONAL HIGHWAYS①②						
Posted Speed③	Rural		Urban			
	Expressway**	Other	Expressway**	Other	UBA	STA
≥55	5280	990	2640	990		
50	5280	830	2640	830		
40 & 45	5280	750	2640	750		
30 & 35		600		600	425	④
≤25		450		450	350	④

Table 14: Access management spacing standards for regional highways
(measurement is in feet)*

Notes for Table 14:

Note: The numbers in circles (②) refer to explanatory notes that follow tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

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SPACING STANDARDS FOR DISTRICT HIGHWAYS^{①②}

Posted Speed ^③	Rural		Urban			
	Expressway ^④	Other	Expressway ^④	Other	UBA	SIA
≥55	5280	700	2640	700		
50	5280	550	2640	550		
40 & 45	5280	500	2640	500		
30 & 35		400		400	350	④
≤25		400		400	350	④

Table 15: Access management spacing standards for district highways
(measurement is in feet)*

Notes for Table 15:

Note: The numbers in circles (②) refer to explanatory notes that follow tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

Notes on Tables 13, 14 and 15:

- ① Where a right of access exists, access will be allowed to a property at less than the designated spacing standard only if that property does not have reasonable access and the designated spacing cannot be accomplished. If possible, other options should be considered such as joint access.

Where the right of access exists, the number of approach roads (driveways) to a single property shall be limited to one, even when the property frontage exceeds the spacing standards. More than one approach road may be considered if, in the judgment of the Region Access Management Engineer, additional approach roads are necessary to accommodate and service the traffic to a property, and additional approach roads will not interfere with driver expectancy and the safety of the through traffic on the highway.

Approach roads shall be located where they do not create undue interference or hazard to the free movement of normal highway or pedestrian traffic. Locations on sharp curves, steep grades, areas of restricted sight distance or at points which interfere with the placement and proper functioning of traffic control signs, signals, lighting or other devices that affect traffic operation will not be permitted.

If a property becomes landlocked (no reasonable access exists) because an approach road cannot be safely constructed and operated, and all other alternatives have been explored and rejected, ODOT might be required to purchase the property. (Note: If a hardship is self-inflicted, such as by partitioning or subdividing a property, ODOT does not have responsibility for purchasing the property.)

(Note ① has precedence over notes ②, ③ and ④.)

- ② These standards are for unsignalized access points only. Signal spacing standards supersede spacing standards for approaches.
- ③ Posted (or Desirable) Speed: Posted speed can only be adjusted (up or down) after a speed study is conducted and that study determines the correct posted speed to be different than the current posted speed. In cases where actual speeds are suspected to be much higher than posted speeds, ODOT reserves the right to adjust the access spacing accordingly. A determination can be made to go to longer spacing standards as appropriate for a higher speed. A speed study will need to be conducted to determine the correct speed.
- ④ Minimum spacing for public road approaches is either the existing city block spacing or the city block spacing as identified in the local comprehensive plan. Public road connections are preferred over private driveways, and in STAs driveways are discouraged. However, where driveways are allowed and where land use patterns permit, the minimum spacing for driveways is 175 feet (55 meters) or mid-block if the current city block spacing is less than 350 feet (110 meters).

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Access Management Spacing Standards for Interchanges

The following tables show the access spacing standards for interchanges as discussed in Goal 3, Policy 3C: Interchange Access Management Areas.

STANDARDS FOR FREEWAY INTERCHANGES WITH TWO-LANE CROSSROADS					
Category of Mainline	Type of Area	Spacing Dimension			
		A	X	Y	Z
FREEWAY	Fully Developed Urban	1 mi. (1.6 km)	750 ft. (230 m)	1320 ft. (400 m)	750 ft. (230 m)
	Urban	1 mi. (1.6 km)	1320 ft. (400 m)	1320 ft. (400 m)	990 ft. (300 m)
	Rural	2 mi. (3.2 km)	1320 ft. (400 m)	1320 ft. (400 m)	1320 ft. (400 m)

Table 16: Minimum spacing standards applicable to freeway interchanges with two-lane crossroads

Notes for Table 16:

1. If the crossroad is a state highway, these distances may be superseded by the Access Management Spacing Standards, providing the distances are greater than the distances listed in the above table.
2. No four-legged intersections may be placed between ramp terminals and the first major intersection.

A = Distance between the start and end of tapers of adjacent interchanges

X = Distance to the first approach on the right; right in/right out only

Y = Distance to first major intersection; no left turns allowed in this roadway section

Z = Distance between the last right in/right out approach road and the start of the taper for the on-ramp

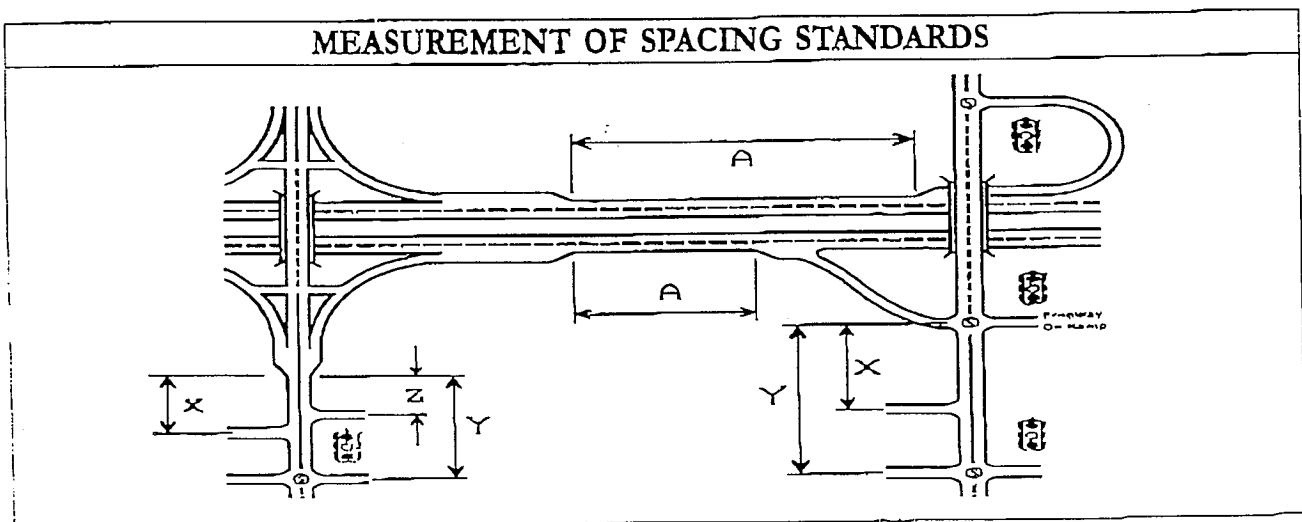


Figure 18: Measurement of spacing standards for table 16

STANDARDS FOR FREEWAY INTERCHANGES WITH MULTI-LANE CROSSROADS						
Category of Mainline	Type of Area	Spacing Dimension				
		A	X	Y	Z	M
FREEWAY	Fully Developed Urban	1 mi. (1.6 km)	750 ft. (230 m)	1320 ft. (400 m)	990 ft. (300 m)	1320 ft. (400 m)
	Urban	1 mi. (1.6 km)	1320 ft. (400 m)	1320 ft. (400 m)	1320 ft. (400 m)	1320 ft. (400 m)
	Rural	2 mi. (3.2 km)	1320 ft. (400 m)	1320 ft. (400 m)	1320 ft. (400 m)	1320 ft. (400 m)

Table 17: Minimum spacing standards applicable to freeway interchanges with multi-lane crossroads

Notes for Table 17:

1. If the crossroad is a state highway, these distances may be superseded by the Access Management Spacing Standards, providing the distances are greater than the distances listed in the above table.
2. No four-legged intersections may be placed between ramp terminals and the first major intersection.

A = Distance between the start and end of tapers of adjacent interchanges

X = Distance to first approach on the right; right in/right out only

Y = Distance to first major intersection

Z = Distance between the last approach road and the start of the taper for the on-ramp

M = Distance to first directional median opening. No full median openings are allowed in nontraversable medians to the first major intersection

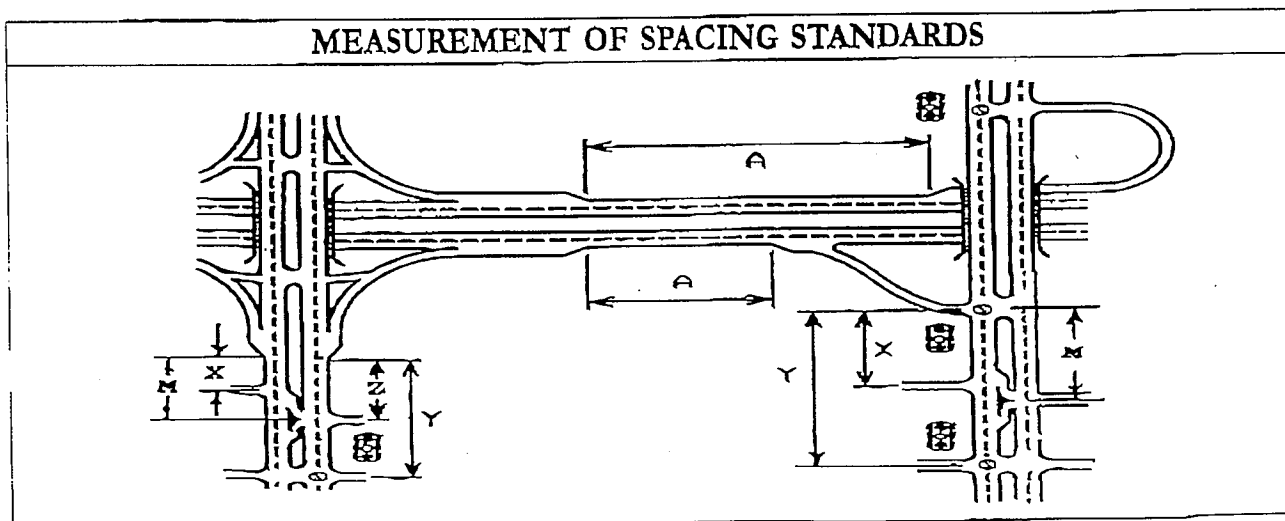


Figure 19: Measurement of spacing standards for table 17

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STANDARDS FOR NON-FREEWAY INTERCHANGES WITH TWO-LANE CROSSROADS							
Category of Mainline	Type of Area	Speed of Mainline	Spacing Dimension				
			B	C	X	Y	Z
EXPRESSWAY	Fully Developed Urban	45 mph (70 kph)	2640 ft. (800 m)	1 mi. (1.6 km)	750 ft. (230 m)	1320 ft. (400 m)	750 ft. (230 m)
	Urban	45 mph (70 kph)	2640 ft. (800 m)	1 mi. (1.6 km)	1320 ft. (400 m)	1320 ft. (400 m)	990 ft. (300 m)
	Rural	55 mph (90 kph)	1 mi. (1.6 km)	2 mi. (3.2 km)	1320 ft. (400 m)	1320 ft. (400 m)	1320 ft. (400 m)

Table 18: Minimum spacing standards applicable to non-freeway interchanges with two-lane crossroads

Notes for Table 18:

1. If the crossroad is a state highway, these distances may be superseded by the Access Management Spacing Standards, providing the distances are greater than the distances listed in the above table.
2. No four-legged intersections may be placed between ramp terminals and the first major intersection.
3. Use four-lane crossroad standards for urban and suburban locations that are likely to be widened.
4. No at-grade intersections are permitted between interchanges less than 5 miles apart.

B = Distance between the start and end of tapers

C = Distance between nearest at-grade and ramp terminal intersections or the end/start of the taper section

X = Distance to first approach on the right; right in/right out only

Y = Distance to first major intersection

Z = Distance between the last right in/right out approach road and the start of the taper for the on-ramp

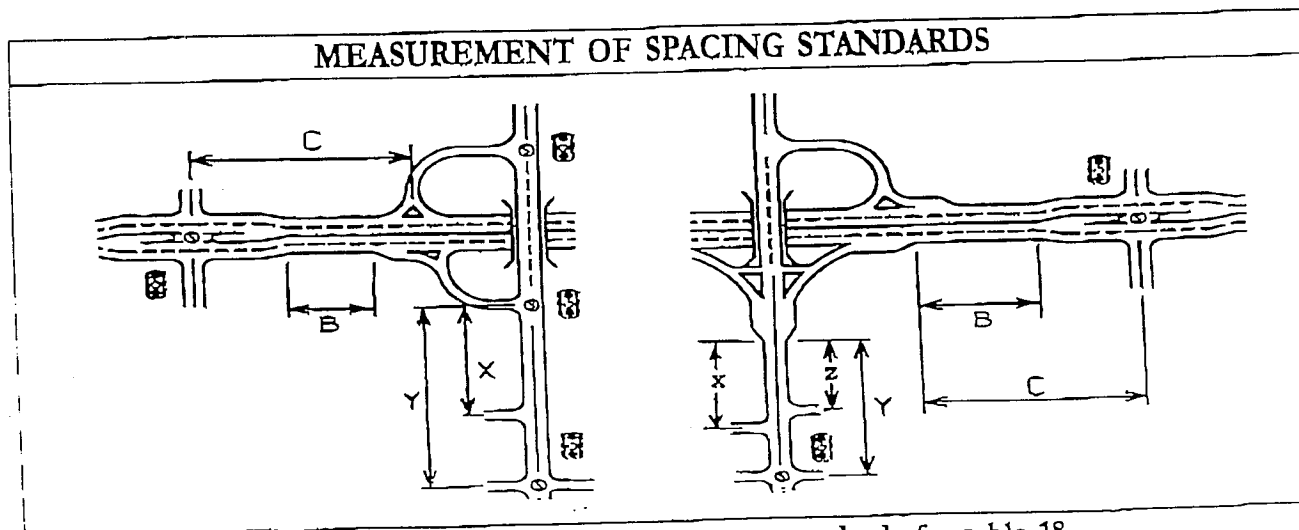


Figure 20: Measurement of spacing standards for table 18

STANDARDS FOR NON-FREEWAY INTERCHANGES WITH MULTI-LANE CROSSROADS								
Category of Mainline	Type of Area	Speed of Mainline	Spacing Dimension					
			B	C	X	Y	Z	M
EXPRESSWAY	Fully Developed Urban	45 mph (70 kph)	2640 ft. (800 m)	1 mi. (1.6 km)	750 ft. (230 m)	1320 ft. (400 m)	990 ft. (300 m)	1320 ft. (400 m)
	Urban	45 mph (70 kph)	2640 ft. (800 m)	1 mi. (1.6 km)	1320 ft. (400 m)	1320 ft. (400 m)	1320 ft. (400 m)	1320 ft. (400 m)
	Rural	55 mph (90 kph)	1 mi. (1.6 km)	2 mi. (3.2 km)	1320 ft. (400 m)	1320 ft. (400 m)	1320 ft. (400 m)	1320 ft. (400 m)

Table 19: Minimum spacing standards applicable to non-freeway interchanges with multi-lane crossroads

Notes for Table 19:

1. If the crossroad is a state highway, these distances may be superseded by the Access Management Spacing Standards, providing the distances are greater than the distances listed in the above table.
2. No four-legged intersections may be placed between ramp terminals and the first major intersection.
3. No at-grade intersections are permitted between interchanges less than 5 miles apart.

B = Distance between the start and end of tapers

C = Distance between nearest at-grade and ramp terminal intersections or the end/start of the taper section

X = Distance to first approach on the right; right in/right out only

Y = Distance to first major intersection

Z = Distance between the last approach road and the start of the taper for the on-ramp

M = Distance to first directional median opening. No full median openings are allowed in nontraversable medians to the first major intersection

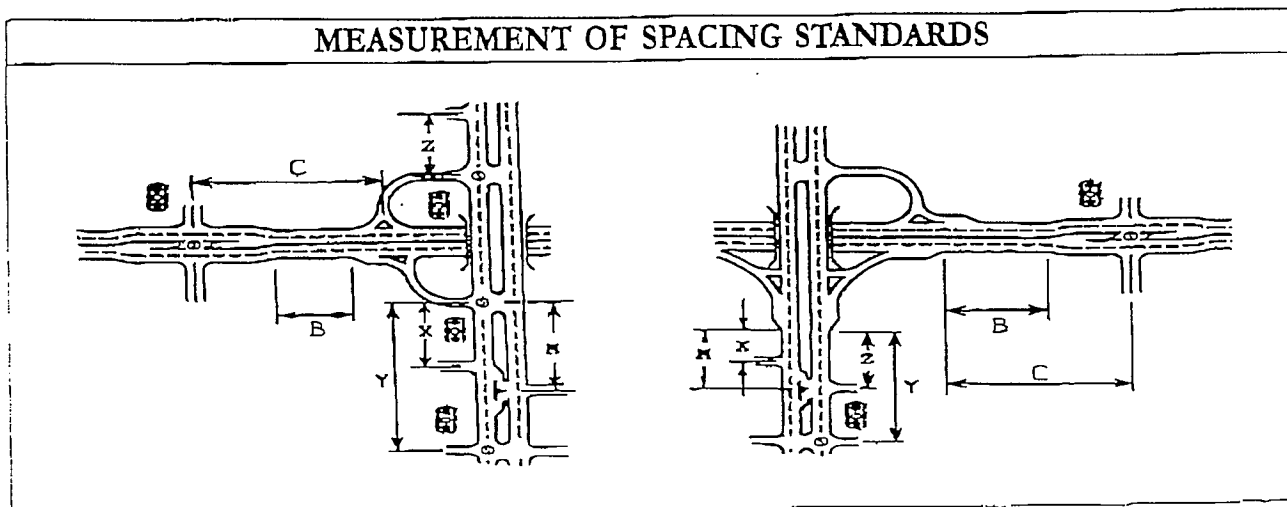


Figure 21: Measurement of spacing standards for table 19

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Access Management Spacing Standard Minor Deviation Limits

The following tables show the access management spacing standard minor deviation limits for the access management classifications listed in Goal 3, Policy 3A: Classification Spacing Criteria, Action 3A.1. The Access Management Spacing Standards are shown in Tables 13, 14 and 15 of this Appendix. Minor deviations may be considered down to the deviation limits shown in Tables 20, 21 and 22. Any request to deviate beyond these limits is considered a major deviation.

SPACING MINOR DEVIATION LIMITS FOR STATEWIDE HIGHWAYS ①②						
Posted Speed③	Rural			Urban		
	Expressways	Other	Expressways	Other	UBA	STA
≥55	(none)	(950)	(none)	(870)		
	[none]	[1150]	[none]	[1000]		
50	(none)	(700)	(none)	(640)		
	[none]	[900]	[none]	[810]		
40 & 45	(none)	(560)	(none)	(530)		
	[none]	[810]	[none]	[740]		
30 & 35		(400)		(350)	(350)	④
		[675]		[600]	[600]	
≤25		(280)		(250)	(250)	④
		[525]		[400]	[400]	

Table 20: Access management spacing standard minor deviation limits for statewide highways
(measurement is in feet)*

Notes for Table 20:

Note: The numbers in circles (④) refer to explanatory notes that follow the tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

() = Driveway spacing minor deviation limit.

[] = Public street spacing minor deviation limit.

SPACING MINOR DEVIATION LIMITS FOR REGIONAL HIGHWAYS ①②						
Posted Speed ③	Rural		Urban			
	Expressway **	Other	Expressway **	Other	U/BA	SUA
≥55	(none)	(700)	(none)	(700)		
	[none]	[870]	[none]	[870]		
50	(none)	(540)	(none)	(540)		
	[none]	[640]	[none]	[640]		
40 & 45	(none)	(460)	(none)	(460)		
	[none]	[550]	[none]	[550]		
30 & 35		(300)		(300)	(300)	④
		[375]		[375]	[375]	
≤25		(220)		(220)	(220)	④
		[350]		[350]	[350]	

Table 21: Access management spacing standard minor deviation limits for regional highways
(measurement is in feet)*

Notes for Table 21:

Note: The numbers in circles (②) refer to explanatory notes that follow the tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

() = Driveway spacing minor deviation limit.

[] = Public street spacing minor deviation limit.

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SPACING MINOR DEVIATION LIMITS FOR DISTRICT HIGHWAYS ①②						
Posted Speed ③	Rural		Urban			STA
	Expressways **	Other	Expressways **	Other	UBA	
≥55	(none)	(650)	(none)	(650)		
	[none]	[660]	[none]	[660]		
50	(none)	(475)	(none)	(475)		
	[none]	[525]	[none]	[525]		
40 & 45	(none)	(400)	(none)	(400)		
	[none]	[475]	[none]	[475]		
30 & 35		(275)		(275)	(250)	④
		[325]		[325]	[300]	
≤25		(200)		(200)	(175)	④
		[245]		[245]	[200]	

Table 22: Access management spacing standard minor deviation limits for district highways
(measurement is in feet)*

Notes for Table 22:

Note: The numbers in circles (②) refer to explanatory notes that follow the tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

() = Driveway spacing minor deviation limit.

[] = Public street spacing minor deviation limit.

Notes on Tables 20, 21 and 22:

- ① Where a right of access exists, access will be allowed to a property at less than minor deviation limits only if that property does not have reasonable access and the minor deviation limits cannot be accomplished. If possible, other options should be considered, such as joint access.

Where the right of access exists, the number of approach roads (driveways) to a single property shall be limited to one, even when the property frontage exceeds the spacing standards. More than one approach road may be considered if, in the judgment of the Region Access Management Engineer, additional approach roads are necessary to accommodate and service the traffic to a property, and additional approach roads will not interfere with driver expectancy and the safety of the through traffic on the highway.

Approach roads shall be located where they do not create undue interference or hazard to the free movement of normal highway or pedestrian traffic. Locations on sharp curves, steep grades, areas of restricted sight distance or at points which interfere with the placement and proper functioning of traffic control signs, signals, lighting or other devices that affect traffic operation will not be permitted.

If a property becomes landlocked (no reasonable access exists) because an approach road cannot be safely constructed and operated, and all other alternatives have been explored and rejected, ODOT might be required to purchase the property. (Note: If a hardship is self-inflicted, such as by partitioning or subdividing a property, ODOT does not have responsibility for purchasing the property.)

(Note ① has precedence over notes ②, ③ and ④.)

- ② These standards are for unsignalized access points only. Signal spacing standards supersede spacing standards for approaches.
- ③ Posted (or Desirable) Speed: Posted speed can only be adjusted (up or down) after a speed study is conducted and that study determines the correct posted speed to be different than the current posted speed. In cases where actual speeds are suspected to be much higher than posted speeds, ODOT reserves the right to adjust the access spacing accordingly. A determination can be made to go to longer spacing standards as appropriate for a higher speed. A speed study will need to be conducted to determine the correct speed.
- ④ Minimum spacing for public road approaches is either the existing city block spacing or the city block spacing as identified in the local comprehensive plan. Public road connections are preferred over private driveways, and in STAs driveways are discouraged. However, where driveways are allowed and where land use patterns permit, the minimum spacing for driveways is 55 meters (175 feet), or mid-block if the current city block spacing is less than 110 meters (350 feet).