



SUBJECT Approach Spacing Near a Public Approach on Region and District Highways with Posted Speed \geq 50 MPH	FINAL NUMBER AM 13-05(B)	EFFECTIVE DATE 05/01/2013	VALIDATION DATE 09/29/2014	SUPERSEDES or RESCINDS
TOPIC/PROGRAM Access Management	APPROVED SIGNATURE Original signed by: Larry McKinley, Access Management Program Manager			

PURPOSE

This Technical Services Bulletin provides guidance for understanding and applying OAR 734-051-4020 (3)(e) to existing connections and applications for new highway approaches. This guidance will help achieve greater statewide consistency in evaluating connections and approach applications for safety and operations concerns by increasing the understanding of the factors that are considered in applying OAR 734-051-4020 (3)(e).

DEFINITIONS

“Connection” means an existing approach as defined in OAR 734-051-1070 (9) or an unpermitted means of vehicular access to or from a state highway and an abutting private property, city street or county road. OAR 734-051-1070(14)

“Downstream” refers to the spatial relationship between a connection or proposed approach and an intersection where traffic passes the intersection before reaching the connection or proposed approach.

“Driving task” refers to a number of discrete and interrelated activities that fall into three levels: control, guidance and navigation as defined by AASHTO “A Policy on Geometric Design of Highways and Streets.

“OAR” refers to Oregon Administrative Rule.

“Stopping sight distance” (SSD) refers to a standard practice defined in the 2004 AASHTO Policy on Geometric Design of Highways and Streets. For the purposes of this bulletin, the AASHTO standard practice calculates a value that is the desirable spacing between a connection or proposed approach and a downstream intersection with a public approach. In the context of OAR 734-051-4020(3)(e), the SSD value does not involve measuring sight triangles but is simply used as the desirable spacing distance.

“Upstream” refers to the spatial relationship between a connection or proposed approach and an intersection where traffic passes the connection or proposed approach before reaching the intersection.

BACKGROUND/REFERENCE

In earlier versions of OAR 734-051, safety factors for highway approaches were generally described as:

- Roadway character
- Traffic character
- Geometric character
- Environmental character
- Operational character

These earlier rules did not quantify or set standards for when safety factors are met. Senate Bill (SB) 264 amended ORS 374 and established specific safety and operations concerns codified in OAR 734-051-4020(3). This bulletin addresses 4020-051-4020(3)(e) of the rule:

(3) Safety and Operations Concerns. *The department has the burden of proving safety and highway operations concerns that it relies upon in requiring mitigation or in denying an application based on those concerns. The department may deny an application where the applicant is unable to provide adequate improvements to mitigate documented safety or highway operations concerns; safety and highway operations concerns that the department may consider are limited to (a) through (f), below;*

(e) The proposed approach is on a district or regional highway with a posted speed of 50 miles per hour or higher and the distance to the nearest public approach is less than the stopping sight distance on the highway, calculated in accordance with the 2004 AASHTO Policy on Geometric Design of Highways and Streets;

OAR 734-051-4020 (3)(e) addresses the complexity of the driving task when a driver traveling at a high speed approaches an intersection and is confronted with multiple connections and potential conflicts at the same time. The intent of this rule is to avoid overburdening the driver, and thereby reduce safety risks. This is especially of concern at higher speeds. Maintaining sufficient spacing between a connection or proposed approach and an intersection with a public approach simplifies the driving task by allowing the driver sufficient time to recognize and respond appropriately to multiple conflicts that are often present at intersections with public approaches.

In general, this safety and operational concern arises when a roadway’s downward slope is greater than 3 percent. At lesser grades, the access management spacing standards of OAR 734-051-4020(8) provide sufficient distance between a connection or proposed approach and an intersection to meet stopping sight distance standards.

EXPLANATION

The SSD is the desirable spacing between a connection or proposed approach and a downstream intersection of the highway with a public approach. SSD refers to a distance that allows a driver to perceive an object on the highway, react and stop the vehicle prior to striking the object. It is desirable to reduce a driver's workload in the critical area around intersections where there are typically more conflicts and higher potential for collisions. The safe stopping distances calculated in the 2004 edition the AASHTO Policy on Geometric Design of Highways and Streets are based upon a comfortable deceleration rate, highway design speed equal to posted speed, and wet surface. The distances calculated provide a margin of safety for a variety of driving conditions. Therefore, the minimum desirable distance between a connection or proposed approach and an intersection with a public approach should be no less than the SSD calculated in accordance with AASHTO methodology.

The desirable spacing determined by this Bulletin only applies to a connection or proposed approach that meets all three of the following criteria. If it does not meet these criteria, then OAR 734-051-4020(3)(e) cannot be used as the basis of a safety or operations concern. The approach or proposed connection must:

- Connect to a regional or district highway;
- Be on a highway with a posted speed of 50 mph or greater; and
- Be upstream of the nearest intersection of the highway with a public approach.

If all three criteria apply, then the reviewer needs to know the posted speed and the roadway slope to determine the desirable SSD. The slope may be determined by using survey data, contour maps, a slope board or handheld level. With the posted speed and roadway slope determined, select the desirable spacing from Table 1.

Table 1: Values for SSD Spacing

Posted Speed	Highway Downgrades		
	-3% to < -6%	-6% to < -9%	≥ -9%
50 mph	446 feet	474 feet	507 feet
55 mph	520 feet	553 feet	593 feet
60 mph	598 feet	638 feet	686 feet
65 mph	682 feet	728 feet	785 feet
70 mph	771 feet	825 feet	891 feet

Table 1 does not contain any values for highway slopes flatter than -3 percent because the standard spacing requirements of OAR 734-051-4020(8) are adequate to address the stopping sight distance concerns with relatively flat or positive roadway slopes.

If the minimum distances in Table 1 are not, or cannot be met, then the Region Access Management Engineer or other qualified staff needs to determine whether mitigation is appropriate or other factors exist that would make a lower distance acceptable. In some cases, a connection may need to be closed or an application denied if the concerns with inadequate spacing cannot be sufficiently mitigated.

RESPONSIBILITIES

The department's staff working within Access Management is responsible for carrying out the guidance in this Bulletin. This includes:

- Region Managers
- District Managers
- Region Access Management Engineer
- Development Review Coordinators
- Access Management Coordinators
- Permit Specialists

ACTION REQUIRED

Implement this Bulletin upon the effective date

SPECIAL INSTRUCTIONS

If problems or concerns develop in implementing this Bulletin, or if further clarification is needed, contact the Access Management Program Manager.

CONTACT INFORMATION

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