

STAFF REPORT

October 25, 2001

No. 010A019 - Ordinance Amendment

ITEM 17

GENERAL INFORMATION:

PETITIONER	City of Rapid City
REQUEST	No. 010A019 - Ordinance Amendment
LEGAL DESCRIPTION	An application by the City of Rapid City to consider an ordinance amending Chapter 17.50 by adding Section 17.50.335; amending Section 12.20.30 of Chapter 12.20; amending Section 15.40.080 of Chapter 15.40; amending Sections 17.50,230, 17.50.250 (f) (2), 17.50.280 and 17.50.300 of Chapter 17.50 of the Rapid City Municipal Code pertaining to sight triangles.
REPORT BY	Blaise Emerson

RECOMMENDATION: Staff recommends that the Ordinance Amendment be approved.

GENERAL COMMENTS:

The Planning Commission authorized staff at the September 20 Planning Commission meeting to proceed with amendments to the Rapid City Municipal Code relating to sight triangles. A sight triangle is a term used to define a window of visibility on a street corner that allows for the safe operation of vehicles, bicycles, and pedestrians through the intersection. In reviewing the Rapid City Municipal Code, Staff has noted that there are a number of different references relating to sight triangles. Several of the references have different standards for calculating a sight triangle. These differences have caused confusion as to which sight triangle is applicable depending on the situation.

Throughout the Rapid City Municipal Code, sight triangles are defined by two equal length legs of a triangle (i.e. seventy foot by seventy foot). This type of sight triangle requirement does not take into specific consideration many of the factors impacting sight distance including the type of intersection (controlled or uncontrolled), the speed of traffic, or the type of road design. The American Association of State Highway and Transportation Officials (AASHTO) has developed sight triangle standards that are based on the type of intersection, road configuration, and speed of traffic. The proposed amendment uses these different attributes in developing a standard for sight triangles.

STAFF REVIEW:

The proposed amendment establishes a section in the Zoning Ordinance where sight triangle and related issues are defined and establishes the standards for sight triangles. This section is then referenced through out the Municipal Code. By placing it in the Zoning Ordinance, it allows for one body, the Zoning Board of Adjustments, to review any exception and grandfathers any obstruction that currently meets the existing code but would not meet the new regulations. The following are the key components to the new amendments:

There would be three standards for a sight triangle: two related to automotive traffic and one for pedestrian traffic. The two standards for automotive sight triangles are based on the

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type of intersection. The Ordinance Amendment defines four different types of intersections: Uncontrolled; Stop-Controlled; Yield-Controlled; and Signalized intersections. The sight triangle requirement for an uncontrolled and yield-controlled intersection is based on two seventy foot length legs of a triangle (see figure 1). This is the existing standard that is used for many of the sight triangle requirements presently. This standard keeps a wide area near the intersection free of obstructions. The requirement for a Stop-Controlled and Signalized intersection would change to the American Association of State Highway and Transportation Officials (AASHTO) standard for a site triangle (see figure 2). The first leg of this triangle is twenty feet back from the curb line or approximately where the driver has stopped. The second leg is based on the center line of the travel lane. The distance for the right hand leg is depended on the speed limit for the roadway. If the speed limit was 30 mile per hour, the length for this leg would be 375 feet and if the speed limit was 45 mile per hour, the length for this leg would be 700 feet. As this illustrates, the area for needed for unobstructed vision increases to insure safe entrance into the intersection increases as the traffic speed increases. It should be noted that the Rapid City Municipal Code defines that every driveway or entrance as a stop-controlled intersection. So for a commercial approach, the American Association of State Highway and Transportation Officials (AASHTO) standard for a site triangle would apply.

The other aspect that is clearly defined in the amendment is the pedestrian sight triangle. While this is not always considered, it can be critical in residential areas or areas near schools. A ten foot standard has been established for a pedestrian sight triangle (see figure 3). Where the pedestrian and automotive sight triangle overlap, all area covered by a site triangle must be kept clear of obstructions (see figure 4).