

Chris Clarke
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**Re: King Street West, Gananoque, Ontario, Proposed Residential Development
 Sight Distance Requirement**

Dear Mr. Clarke:

This letter has been prepared to respond to a review comment received for the development application for a site on King Street West in the Town of Gananoque, part Lot 11, Concession 1.

According to the Transportation Association of Canada (TAC) guidelines, “the sight distance required is determined in consideration of the design speed of the intersecting roadway and the sight triangle requirements described in Chapter 9.” Clear sight lines are provided for the full range of eye height. The height of object is 1.3 m, based on the height of a passenger car. The driver of a vehicle approaching an intersection with no control should be able to see potentially conflicting vehicles in sufficient time to stop before reaching the intersection.

Vehicles Exiting the Site

The sight distance for a car exiting the site viewing approaching cars from the west (departure sight triangles) are illustrated in **Figure 1**.

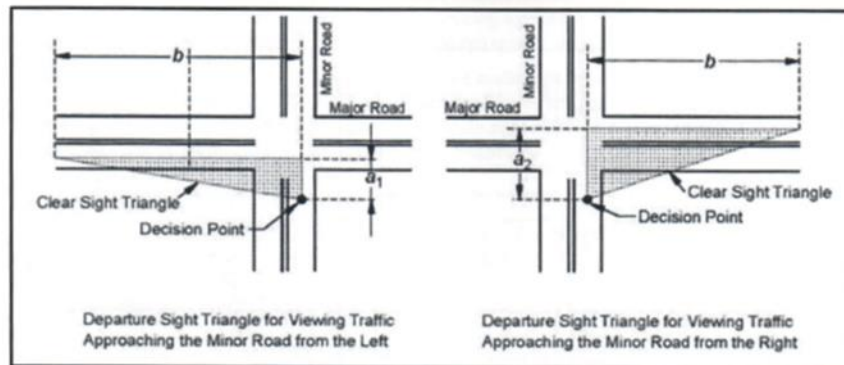


Figure 9.9.2: Departure Sight Triangles (Stop-Controlled)

Figure 1: Departure Sight Triangles (Stop-Controlled)
 (Source: Figure 9.9.2, Chapter 9 – Intersections, TAC Manual)

The length of the sight triangle leg (case A, no traffic control) for a design speed of 60 km/h is a minimum of 55 m (exiting the development) for the vehicle exiting the site to see an approaching vehicle. The site provides 85 m of sight distance assuming clearing of vegetation along the right-of-way which will be completed as part of the site preparation.

Vehicles Stopping for an Eastbound Vehicle Entering the Site

The stopping site distance on level roadways for automobiles for a design speed of 60 km/h is 85 m.

Proposed Site Conditions

The site was reviewed on August 30, 2021 by the undersigned to assess the stopping sight distance available for vehicular access onto King Street West. The proposed driveway will be located at the eastern-most portion of the residential development. It will be located in a 50 km/h speed zone controlled by the vertical and horizontal curvature on King Street (former Highway 2). The sight distance was measured and determined to be 82 m. See **Photo 1** showing the visibility of the proposed driveway for westbound vehicles.



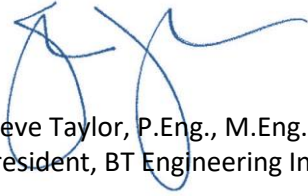
Photo 1: View of driveway for westbound vehicles entering the Town (vegetation within right-of-way to be removed) where the driveway is to be located beyond the vegetated right-of-way

The proposed driveway location is the recommended location because it maximizes the available sight distance to the west, matches the previous driveway curb cut and is situated at the last light standard in the Town, providing greater safety for the driveway at night.

Conclusion

Based on our site review and the design standards for visibility for the existing posted speed (50 km/h) and an assumed design speed of 60 km/h, it is our opinion that the proposed driveway location meets TAC design standards for sight distance.

Yours truly,



Steve Taylor, P.Eng., M.Eng., CVS-Life
President, BT Engineering Inc.

cc: Stefano Ferrante