



**ENGINEERING DEPARTMENT**  
Development Division

**MEMORANDUM**

**DATE:** March 31, 2003  
**TO:** City of Peoria Development Community  
**FROM:** David A. Moody, P.E. Engineering Director  
**SUBJECT:** Revised Deceleration Lane Criteria

---

**1. Deceleration Lane Requirement Criteria:**

- A. Deceleration lanes (right-turn lanes) are required at all street intersections of Parkways, and Major Arterials. Deceleration lanes may be required on Minor Arterial and Collector streets, when determined by the City Engineer.
- B. In conjunction with driveways on Parkways and Major Arterials, deceleration lanes for driveways may be required on Minor Arterial and Collector streets, which may require additional right-of-way. To determine the need for a deceleration lane on streets classified as Minor Arterial or Collector, the site Traffic Engineer shall analyze, for City of Peoria review and approval, the site to see if the proposed site conditions meets a **minimum of three** of the following criteria(s):
  - 1.) At least 5,000 vehicles per day are using or are expected in the near future (five years after the development is built-out) to be using the adjacent street.
  - 2.) The 85<sup>th</sup> percentile speed limit is greater than 35 mph or the posted speed limit is 35 mph or greater.
  - 3.) At least 1,000 vehicles per day are using or are expected to use the driveway(s) for the development or adjacent development(s) (existing or future).
  - 4.) At least 30 vehicles are expected to make right-turns into the driveway(s) for a one-hour period for the development or adjacent developments (existing or future).
- C. **Commercial and Industrial sites:** Through the approved Traffic Analysis, if it was determined that such a deceleration lane is not warranted (per criteria 1B above), a minimum of one driveway shall be designated as truck delivery access drives and shall meet the minimum turning path for a WB-67 design vehicle, without requiring maneuvering into more than one traffic lane within the public roadway. Additional driveways may be required to meet this criteria when determined by the City Engineer based on local conditions.
- D. **Storage facilities:** Through the approved Traffic Analysis, if it was determined that such a deceleration lane is not warranted (per criteria 1B above), the main access driveway shall meet the minimum turning path for a MH/B design vehicle.
- E. At the discretion of the City Engineer or their designee, a deceleration lane may be required regardless of the minimum criteria, if site specific conditions warrant the addition of such a lane.

- F. In no event shall adjacent driveways be located within the area of the deceleration lane and the required taper lengths unless specifically approved by the City Engineer.

## **2. Deceleration Lane Length:**

- A. The lengths of deceleration lane outlined in this section exclude the required length of taper, which should be approximately 8-feet to 15-feet longitudinally per 1-foot transversely (8:1 to 15:1). These taper lengths are only applicable to deceleration lanes. Tapers associated with changing of pavement widths shall be in accordance with the City of Peoria technical design requirements for street classification outlined in the Infrastructure Development Guidelines.
- B. The deceleration lane length must be determined by the site Traffic Engineer on a case-by-case basis and must be approved by the City Engineer or their designee.
- C. On Parkways and Major Arterial roads and streets, the deceleration lane length required is needed for a safe and comfortable stop from the design speed of the highway. Minimum deceleration lane lengths for auxiliary lanes on grades of 2 percent or less, with an accompanying stop condition, for design speeds of 30, 40, and 50 mph are 235, 315, and 435 feet respectively.
- D. Deceleration lanes serving ingress/egress driveways on collector and local commercial streets shall be calculated based on a queuing length calculated from an average 2-min period within the peak hour. However, in no event shall the minimum length be less than space required for 2 vehicles. The type of vehicles used in the calculation shall depend solely on the type facility being studied accounting for 10% truck traffic (minimum of one) where applicable.
- E. Deceleration lanes serving ingress/egress driveways on arterial streets shall be calculated based on an average 2-min period within the peak hour. However, in no event shall the total length (stacking length and taper) be less than the length required to accommodate the breaking distance in addition to the queuing length calculated from an average 2-min period within the peak hour (minimum of two vehicles). The type of vehicles used in the calculation shall depend solely on the type facility being studied accounting for 10% truck traffic (minimum of one) where applicable.
- F. Deceleration lane length for driveway serving school sites may be required to be increased based on recommendation of the City Engineer after review of the onsite traffic circulation plan.
- G. The City Engineer may require certain lengths of deceleration lane or tapers based on specific site conditions.