

# DESIGN MEMO 9.05

To: Designers, Contractors, and City Departments  
Date: January 10, 2023  
Subject: Stop Line Placement  
Category: Traffic

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## 1 Purpose

Proper use and placement of stop lines at intersections of various sizes and control types is critical to both vehicular and pedestrian safety. These markings help prevent encroachment of vehicles into crosswalks, reduce conflict between stopped and turning vehicles, and provide guidance for maintaining maximum available sight distance.

This memo focuses on specific factors that influence the proper placement of stop lines.

## 2 Applicability

Until further notice, this direction will be used for scoping, design, and construction of plans within the City of Columbus right-of-way. The guidance provided in this memo is applicable to any intersection with stop or signal control that is being proposed and/or constructed within the City of Columbus except for residential streets without centerline striping.

## 3 Definitions

Definitions of key terms in this memo are provided in City of Columbus Design Memo 1.00: Introduction.



## 4 Design Guidance

Design requirements for stop line placement shall comply with the referenced sections of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) and the ODOT Location and Design (L&D) Manual, Volume 1, Section 201.3, except as modified herein.

### 4.1 Placement

Stop lines shall be used at all signalized and most stop-controlled legs of an intersection. Stop lines shall *not* be used at locations where motorists are required to yield, except as provided in OMUTCD Section 8B.28 for railroad grade crossings.

Stop lines shall be 20 inches wide and consist of solid white lines extending across the approach lanes to indicate the point behind which vehicles are required to stop. A minimum clear distance of 4 feet shall be provided between the trailing edge of the nearest crosswalk line and the leading edge of the stop line. In the absence of a marked crosswalk, the stop line should be placed at the desired stopping point but shall not be placed more than 30 feet or less than 4 feet from the nearest edge of the intersecting traveled way. Exceptions to the maximum set back of 30 feet may be considered by the City to accommodate turns of large design vehicles.

At stop-controlled approaches without a centerline, a stop line should be used to supplement the stop sign when feasible. Where a centerline is present, a stop line is required. Placement of the stop line should be based on the intersection sight distance (ISD) and/or crosswalk placement at the intersection. Evaluation of the ISD shall follow the guidance of Department of Public Service Design Memo 4.11. Ideally, the stop sign is placed adjacent to the stop line. However, if visibility of the stop sign is limited at this location, then the sign shall be moved to the most visible location available within the guidelines of OMUTCD Section 2B.10. If the stop sign is moved away from the stop line, the stop line shall either remain at a location that provides the motorist with the greatest view of oncoming traffic or be eliminated.

At residential-to-residential intersections, stop lines are not required by the City.

### 4.2 Staggered Stop Lines

It may be necessary to stagger one or more stop lines to safely accommodate large vehicles turning left or right from the intersecting street. See City of Columbus Design Memo 9.04: Turning Radii for guidance on selecting an appropriate design and check vehicle when determining the need for staggered stop lines. Special consideration should be given to transit routes where buses are making frequent turns.

Use of staggered stop lines should be limited to locations where lane encroachment on the receiving street by the design vehicle would occur frequently and present operational or safety issues if not corrected.

