

Michigan Department of Transportation

Diagonal Parking Review Process

for Local Agency Projects

November 10, 2003
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I. If diagonal parking is proposed within the project limits, then the Local Agency must submit an Engineering Study to the Michigan Department of Transportation – Local Agency Programs (LAP) Staff Engineer prior to the Grade Inspection for review and concurrence.

A. The following documents must be referred to in the Engineering Study:

1. American Association of State Highway and Transportation Officials, A Policy on Geometrics Design of Highways and Streets, Chapter 4 (Cross Section Elements), *On Street Parking* (AASHTO) as well as other applicable sections of AASHTO
2. “Guidelines for Parking Facility Location and Design”, Institute of Transportation Engineers, Technical Committee 5D-8, April 1994, (ITE)

B. The Engineering Study shall be prepared, signed, and sealed by a Professional Engineer registered in the state of Michigan and shall include the following:

1. Function of the street
 - a) Arterial
 - b) Collector
 - c) Local
2. Adjacent land use
 - a) Retail Business
 - b) City Park
 - c) Government Offices
 - d) etc.
3. Traffic volume
4. Crash analysis along with last three years of crash history for the proposed location of diagonal parking.
5. Proposed design speed as well as posted speed.
6. Existing street dimensions
7. Lane width
 - a) Parking width
 - b) Curb and gutter
 - c) etc.

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8. Scaled detail of proposed plan
 - a) Dimension lane width
 - b) Dimension parking bay width, length, and angle
 - c) Dimension shy distance
 - d) Show all cross roads and driveways in the immediate area
9. Proposed sight distance
10. Stopping sight distance for traveling motorists
Decision sight distance for parked motorists
11. Proposed impact on traveled way
 - a) Turning radius into parking stalls
 - b) Turning radius out-to the traveled way
12. Develop a summary substantiating minimum criteria in met for providing a design with minimal impacts to traveled way and opportunity for reasonable safe decision making by drivers.

II. LAP staff engineer: concurs/denies recommendations

- A. Compares diagonal parking plan with recommended minimum dimensions and desirable sight distances. (Reference ITE parking stall dimensions along with AASHTO requirements). This includes width of parking bay, shy distance (buffer area), and lane width, along with the available decision sight distance the driver of a parked vehicle will have without impeding the traveled way. In other words; the driver pulling out of the parking bay has an opportunity to back out a number of feet, stop, look down the traveled way, and safely continue when traffic is clear. Angle parking without a buffer zone to provide a desirable decision sight distance is unacceptable.
 1. The minimum stopping sight distance for 25mph posted speed is 155ft (AASHTO).
 2. The “optimum” minimum stall width is 8.5 ft (ITE).
Stall widths are measured perpendicular to the vehicle. If the stall is placed at an angle of less than 90 degrees, the width parallel to the aisle must be increased proportionately.
 3. The stall length should accommodate the average vehicle.
Recommended length is 17.5 ft (ITE).
- B. Concurr/denies recommendations and submits reply back to the requesting Local Agency.