DelDOT

Traffic Systems Design Directive

169 Brick Store Landing Road, Smyrna, DE

Number (Year - #): 2019-1

Requestor Name: Mark Luszcz

Date Submitted: 2/15/2019

Applicable Chapter / Section / Page / Figure in current manual: Chapter 4.C.4(a)

Requires modification to Traffic Design Manual?
- [x] Yes
- [ ] No

Description of Current Practice: See attached.

Recommended Change: See attached.

Date Received: 10/21/2019

Received By: Scott Neidert

Based upon the conditions presented, it is recommended that this be approved as an updated Traffic Systems Design Practice and included as a revision to the Traffic Design Manual (if applicable).

Recommended By: _____ (Requestor) Date: 12/5/19

Recommended By: _____ (Design / Construction / Safety / Studies Manager) Date: 12/9/2019

Approved By: _____ (Signature) Date: 12/9/19

Status / Date Completed: _____

CHAPTER IV

Page 72, Section C, Item 4a

Provision:

Pedestrian Signal Guidelines

The number of pedestrian crossings required is determined based on the surrounding land use and pedestrian patterns at the intersection, combined with consideration to avoiding crossing pedestrians across the heaviest vehicular movements, where possible. Typically, DelDOT will install crosswalks across both minor street approaches and one mainline approach. Two mainline crosswalks will be considered based on pedestrian desire lines and the impact to both pedestrian and vehicular traffic.

Suggested Revision:

Pedestrian Signal Guidelines

The number of pedestrian crossings to include at a signalized intersection should be determined based on a review of pedestrian demand, surrounding land use, vehicular traffic operations, signal phasing, and physical constraints. Except in rural areas where there is little to no pedestrian demand, crosswalks, associated pedestrian traffic signals, and accessible landing areas should be installed across all intersection approaches. In some situations, physical constraints may preclude one or more crosswalks from being installed without the implementation of a larger project. Additionally, where the surrounding land use and/or physical conditions (e.g. guardrail, lack of sidewalk, lack of shoulder, etc.) make the presence of pedestrians improbable or the establishment of a crosswalk would result in undesirable conditions, new crosswalks at the applicable corners of the intersection may be omitted.

Any traffic analyses as well as supporting documentation for omitted crossings should be submitted to the DelDOT Traffic Section for review and approval.

Pedestrian signal phases associated with crossings of major street approaches often have a negative effect on the proportion of green time that may be allocated to the major street vehicular signal phases. Therefore, traffic analyses should normally be conducted to estimate the vehicular operational impact of one vs. two main street crosswalks, as well as pedestrian signal phases that are designed to have pedestrians cross the full width of divided highways vs. stopping in the median (undesirable). Furthermore, two main street crosswalks with side street split phasing and significant peak hour vehicular and pedestrian demand may result in inefficient vehicular operations. Careful consideration and analysis should be conducted for this situation.

Operational analyses should consider the expected pedestrian demand as well as pedestrian demand that will result in the calling of the pedestrian phase during every peak hour signal cycle. Submit all analyses to the DelDOT Traffic Section for review and approval.

The following crossing designs are undesirable but, in some situations, unavoidable. They should be used with caution and only where physical constraints and/or major operational issues would otherwise result:

- Pedestrian signal phases that are designed for pedestrians to stop in a median area
- Diagonal crossings