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5.8.2 Pedestrian facilities

5.8.2.1 General

5.8.2.1.1 Policy overview

In general sidewalks and similar pedestrian facilities such as trails, shared use paths, and bicycle lanes are covered in other parts of this manual and in the Design Bureau's Design Manual [DB DM Chapter 12]. Pedestrian facilities on a bridge need to be coordinated with facilities off the bridge, and there are differences in policy depending on whether the bridge also carries highway lanes.

The first design decision is whether the pedestrian facility is to be a separate bridge or part of a highway bridge. That decision typically is a joint decision between the Design Bureau and the Preliminary Bridge Design Unit but may involve District and other Bureaus. For a separate bridge, a path under a bridge, or a path through an embankment, decision guidelines are given in the Preliminary Design section of this manual [BDM 3.5]. Decision guidelines for a pedestrian facility on a highway bridge are given in a separate article [BDM 3.6.2.2].

After the decision regarding the type of pedestrian facility is made, designers will need to consider the following.

- The facility must meet the Americans with Disabilities Act (ADA). The ADA and Iowa DOT policy include requirements for width, cross slope, grade, surface, discontinuities, and separation barriers [BDM 1.5].
- For a separate facility, considerations beyond ADA include width, drainage and snow removal, vertical clearance, fencing, hydraulic forces (if applicable), shy distance, and lighting [BDM 3.2.5].
- For a facility on a highway bridge, considerations beyond ADA include width, raise, and inspection and maintenance [BDM 3.6.2.2].
- Depending on the type of pedestrian facility the final designer will need to consider guidelines for a pedestrian railing [BDM 5.8.1.2.2], bicycle railing [BDM 5.8.1.2.3], and/or separation railing [BDM 5.8.1.2.4].
- Allowance for the load of a future wearing surface may need to be included with the sidewalk dead load [BDM 5.2.2.2].
- Live loads for a sidewalk [BDM 5.2.2.2] may need to be supplemented with a load for a maintenance vehicle in some pedestrian facility conditions. For a facility on a bridge live loads are to be considered along with vehicular loads [BDM 5.4.1.2.2, 5.5.1.2.2, and 5.6.1.2.2].
- For highway bridges with pedestrian facilities the final designer shall include in the plans a staking diagram [BDM 1.8.4] and a sidewalk approach slab detail sheet (or similar sheet for other pedestrian facilities) [BDM 1.8.10.6].

All structural design for pedestrian facilities shall be conducted using load and resistance factor design (LRFD).

5.8.2.1.2 Design information

For the final designer the basic decisions for the pedestrian facility will be included on the type, size, and location plan (TS&L). If additional information is needed the final designer shall consult with the preliminary designer and/or Design Bureau.

5.8.2.1.3 Definitions

Reserved.

5.8.2.1.4 Abbreviations and notation

ADA, Americans with Disabilities Act
LRFD, load and resistance factor design
TS&L, type, size, and location

5.8.2.1.5 References

Reserved.