



## 6.3 CATWALKS ON STEEL BRIDGES

### 6.3.1 GENERAL

This policy addresses design criteria for catwalks on steel bridges. A catwalk is a narrow walkway that provides access to some parts of a steel bridge for maintenance and inspection.

### 6.3.2 DESIGN CRITERIA

#### 6.3.2.1 Structure Design

The catwalk structure must be designed at strength limit state with a live load factor of 1.75 in accordance with the current version of *AASHTO-CA BDS* (AASHTO, 2017; Caltrans, 2019) for the two cases: (1) a uniform load of 40 psf, and (2) a concentrated load of 300 lb (ASCE, 2016).

#### 6.3.2.2 Safety Design

Materials and surfaces must conform to appropriate AASHTO and/or Cal-OSHA standards. Wood must not be used for railing, structural support, or planking material.

Guardrails and handrails must be designed to resist a concentrated load of 200 lb applied in any direction and at any point on the top rail.

Catwalks must be a minimum of 2 feet wide and must have 4-inch high toe boards or plates installed whenever pedestrians, vehicular traffic, rail traffic, or marine traffic pass under the walkway.

#### 6.3.2.3 Access Design

Catwalks must have lockable gates or hatches to control access.

Access ladders with fall protection mechanisms must be provided where no other means of access is available. Access ladders must have lockable gates or hatches to control access. For a new structure, when access requires a climb of 60 vertical feet or more, a mechanical lift should be built into the structure.

Six feet of headroom is preferred. The number of obstacles in the catwalk passageways should be minimized.

Where catwalks are located in more than one bay, a walkway must be provided at the



piers or bents that crosses from one catwalk to the next.

### 6.3.3 REFERENCES

1. AASHTO. (2017). *AASHTO LRFD Bridge Design Specifications*, 8<sup>th</sup> Edition, American Association of State Highway and Transportation Officials, Washington DC.
2. Caltrans. (2019). *California Amendments to AASHTO LRFD Bridge Design Specifications*, 8<sup>th</sup> Edition, California Department of Transportation, Sacramento, CA.
3. ASCE. (2016). *ASCE-SEI 7-16: Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, American Society of Civil Engineers, Reston, VA.