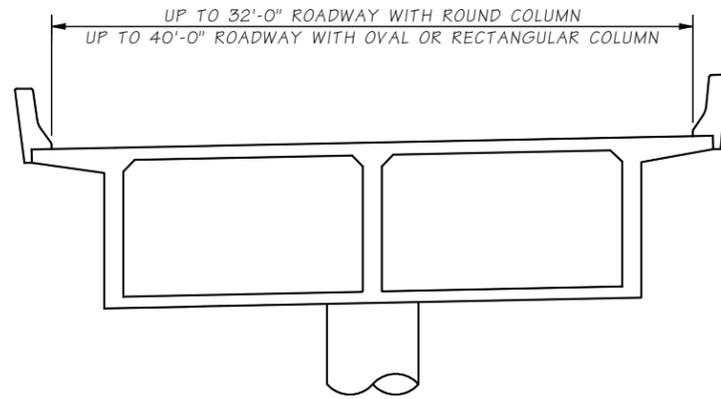
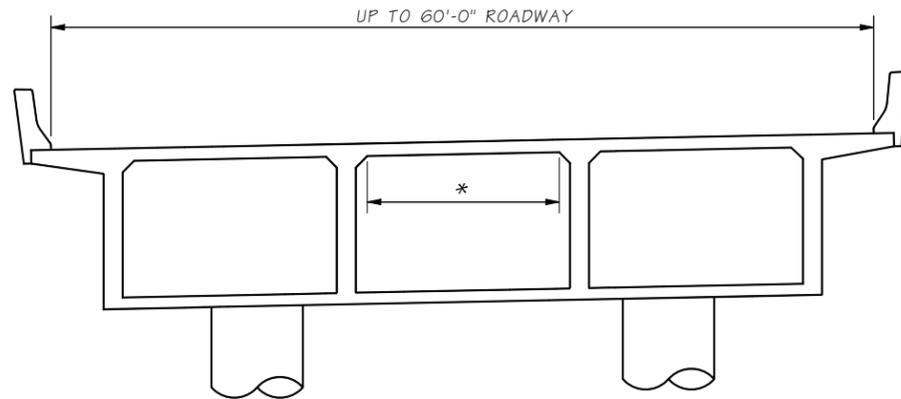


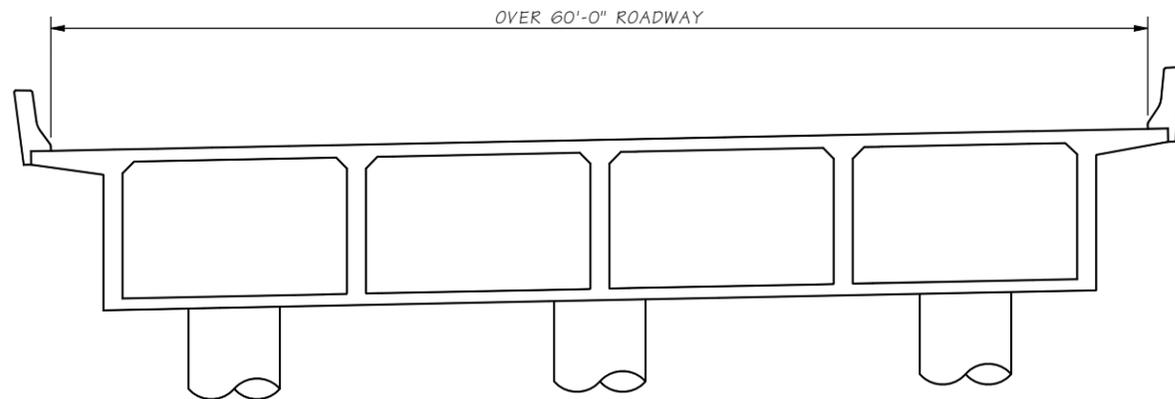
LAST REVISION: 12/11/2016



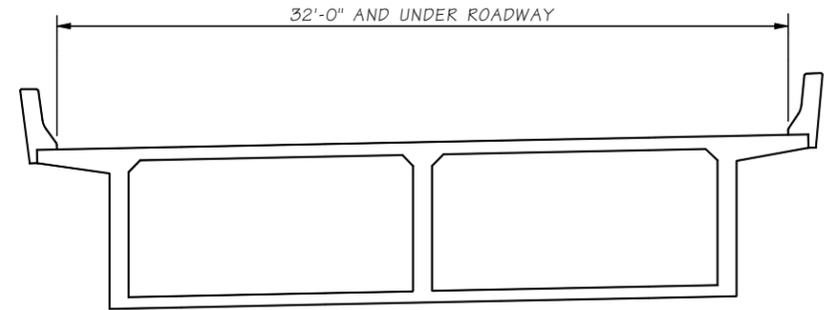
1 COLUMN MINIMUM
PROVIDE COLLISION PROTECTION
OR DESIGN FOR COLLISION LOADS.



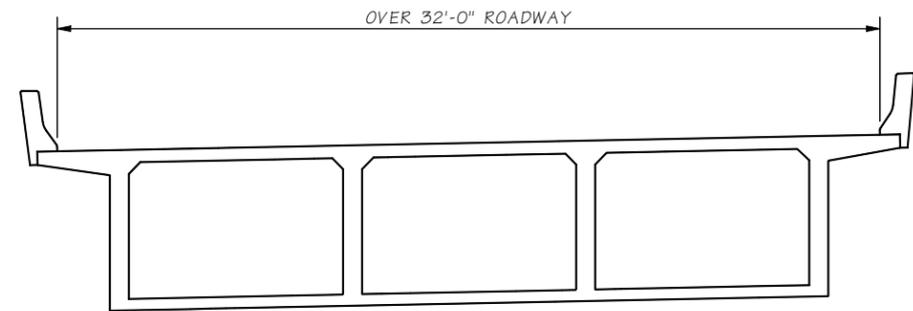
2 COLUMNS MINIMUM
PROVIDE COLLISION PROTECTION
OR DESIGN FOR COLLISION LOADS.



3 COLUMNS MINIMUM
SUBSTRUCTURE DESIGN



3 WEBS MINIMUM



4 WEBS MINIMUM

SUPERSTRUCTURE DESIGN

DESIGN NOTES:

1. USE THE MINIMUM COLUMNS AND WEBS SHOWN TO MEET REDUNDANCY CRITERIA FOR PREVENTING CATASTROPHIC COLLAPSE OF BRIDGES.
2. DRAWINGS ARE SHOWN FOR CONCRETE BOX GIRDERS BRIDGES, BUT THE COLUMN AND WEB REQUIREMENTS ALSO APPLY TO OTHER BRIDGE TYPES.

* 8'-0" MAX. IS PREFERRED FOR EASE OF CONSTRUCTION.

BRIDGE REDUNDANCY CRITERIA

2.3-A2-1

SHEET NO. _____

JOB NO. _____

SR _____

BRIDGE DESIGN ENGR. _____

SUPERVISOR _____

DESIGNED BY _____

CHECKED BY _____

DATE _____

REVISION _____

BY _____

APP'D _____

M:\BRIDGELIB\BDM\Chapter 2>window files\S23A21.wnd

STATE

FED. AID PROJ. NO.

SHEET NO.

TOTAL SHEETS

10

WASH.

JOB NUMBER

BRIDGE AND STRUCTURES OFFICE



Washington State Department of Transportation

BRIDGE SHEET NO.

SHEET

OF

SHEETS