

DESIGN CRITERIA

The purpose of this drawing is to provide standard details only and fitness for purpose shall conform to AS 5100. The details shall be determined and certified by the bridge design engineer. Because every abutment protection is designed to suit its specific location, this drawing shall be read in conjunction with the project specific drawings.

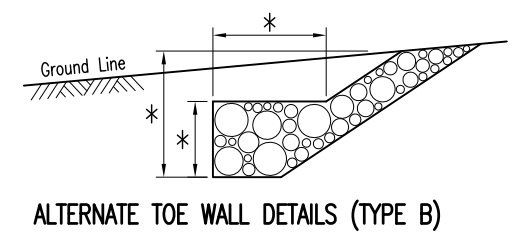
In accordance with Workplace Health and Safety requirements, abutment headstocks must be easily accessible to allow them to be inspected and maintained. Where the clearance is no greater than 1700 high, this can be done by walking around the base of the protection. If the clearance is greater than 1700, a platform shall be provided 1700 from the underside of the bridge (refer to Standard Drawing 2233).

Provided that the roadway embankment is no steeper than 1 on 2, access to the underside of the bridge shall be by walking down the side of the protection. If the embankment is steeper than 1 on 2, a risk assessment shall determine the best method of accessing the underside of the bridge. This may be by walking down the road embankment where it is not too steep, or by connecting a safety harness to a guardrail post for access down the protection. Roadway embankments steeper than 1 on 2 must be protected.

When designing abutment protection, consideration must be given to the strength of the subgrade material. The rock spillthrough shall be placed to profile before the deck units/girders are erected on the end span.

The possibility of scour at the protection must be assessed at each abutment. Toe walls (Type A and B) are only suitable for low scour situations. The protection may need to be modified in high scour situations.

Prestressed piles shall be adequately protected to avoid potential damage from falling rocks while the rock is being placed.



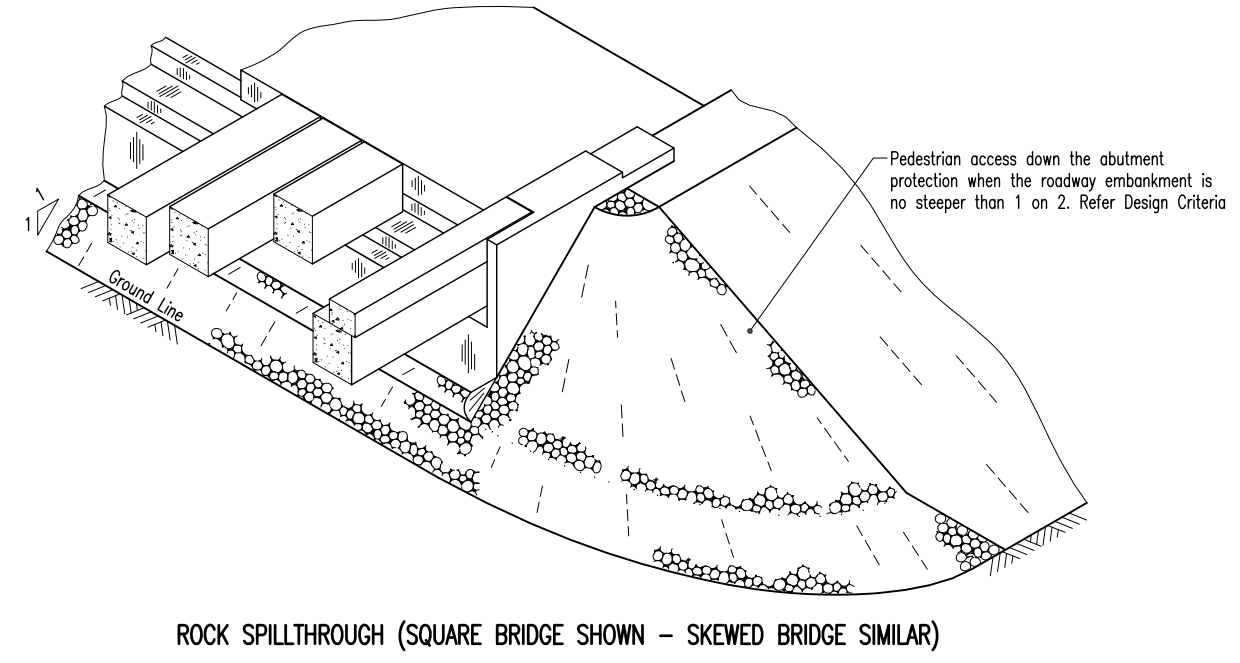
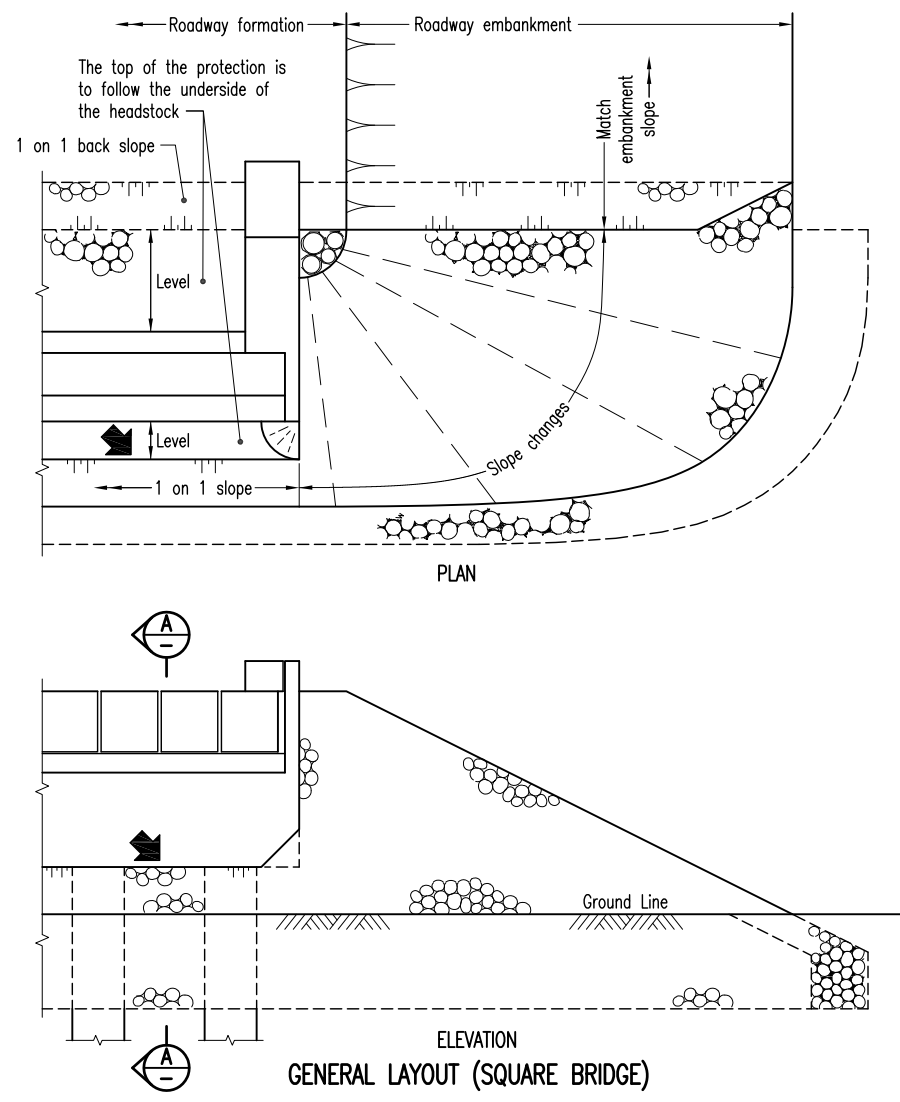
Note: The purpose of this drawing is to provide typical standard details. The fitness for purpose of this drawing for a specific project shall be determined and certified by a RPEQ engineer. Project specific details may be required to be included in the scheme drawings.

NOTES:

1. This drawing was previously Standard Drawing No. 1540.
2. Refer Design Criteria for Bridges and Other Structures for the abutment protection type selection criteria.
3. DIMENSIONS are in millimetres unless shown otherwise.
4. SETTING OUT POINTS shown thus

ASSOCIATED DEPARTMENTAL DOCUMENTS:
 Standard Drawings
 Specifications
 Bridge Scour Manual
 Design Criteria for Bridges and Other Structures

REFERENCED DOCUMENTS:
 Departmental Standard Drawings:
 2233 Abutment Protection – Type 1 – Rock Spillthrough – greater than 1700 Clearance
 Australian Standards:
 AS 5100 Set Bridge Design
 Legislation:
 Work Health and Safety Act 2011
 Work Health and Safety Regulations 2011



Department of Transport and Main Roads			
ABUTMENT PROTECTION			
TYPE 1 – ROCK SPILLTHROUGH – UP TO 1700 CLEARANCE		A3	Standard Drawing No 2232 Date 4/15
		Not to Scale	
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