

**FINAL BRIDGE
HYDROLOGY AND HYDRAULICS REPORT**

**EL PASO COUNTY
LORSON BOULEVARD BRIDGE
OVER JIMMY CAMP CREEK**

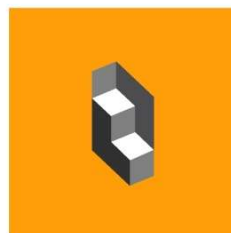
LORSON RANCH DEVELOPMENT



PREPARED BY:

LORIS AND ASSOCIATES INC.

100 SUPERIOR PLAZA WAY
SUITE 220
SUPERIOR, CO 80027
(303) 444-2073



L O R I S

Layout Recommendations

Depth of Riprap below Streambed: 99.75 ft

Design thickness of riprap below streambed is greatest of Contraction Scour Depth (includes Long-Term Degradation, if applicable), Bed Form Depth, or 3x Design D50

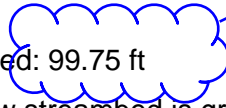
Minimum Riprap Extent: 6 ft

Filter Placement Extent: 4 ft

See HEC 23, Figure 11.15

No channel used in calculations

typo?



Layout Recommendations

Minimum Riprap Thickness: 510 in

Minimum Horizontal Extent of the Toe Apron from the Abutment Toe: 16.9 ft

Minimum Extent of "Wrap Around" beyond the Abutment Radius, along the Approach Embankment: 25 ft

See HEC 23, Figure 14.7

No channel used in calculations

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