



Natural Resources Conservation Service  
210 Walnut Street, Room 693  
Des Moines, IA 50309-2180

May 8, 2012

ENGINEERING FIELD HANDBOOK (NEH Part 650)  
IA210-ENG-AMENDMENT IA57, CHAPTER 6

**PURPOSE:** This notice transmits pages IA6-15(6) through IA6-15(8) dated April 2012.

**Effective Date:** This Amendment is effective upon receipt.

**Filing Instructions:** The following pages should be filed in the Engineering Field Handbook as indicated below:

Remove Pages

IA6-15(6) through (8) dated January 2012

Insert Pages

IA6-15(6) through (8) dated April 2012

This amendment covers the following modifications to Iowa's hydraulic design spreadsheet, Semicircular\_Drop\_Structure.xlsx, standard drawings 1409, 1410, and 1415 and free-outlet capacity tables for semicircular-weir toewall drop spillway structures:

Standard drawings IA-1409 and 1410 (Steel and Aluminum Drop Spillways) were revised in January to allow longer headwalls to accommodate a wider approach channel where required. A "level downstream berm" was used on the drawings, spreadsheet and capacity tables in Amendment IA56, as a layout tool to align earthwork on upstream and downstream sides of the structure. New users of the spreadsheet and drawings found this confusing; so revisions have been made to clarify the design approach, assist the user in selecting the most efficient upstream channel width, and improve constructability.

Quantity formulas for concrete, rebar, drainfill, riprap and geotextile have been added to the drawings (1409, 1410, and 1415) to assist in completing the Bill of Materials (pending completion as fillable forms). Support angles were eliminated from drawings 1409 and 1410 based on construction feedback. Notes not related to construction were removed, and sketches were added for ease in identifying tile stub locations and concrete form dimensions.

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The headwall length "S" was modified on standard drawing 1415 for the largest structure (D=6 feet and H=2'-10") from 5 full aluminum sheets to 4-1/2 sheets, to provide a minimum embedment length more similar to the other structure sizes. Drawing 1415 also includes formulas for granular base and granular backfill quantities.

The drawings may be accessed on the Iowa website at the following location:

<http://www.ia.nrcs.usda.gov/technical/design/InChannelDrawings.html>

The spreadsheet, Semicircular\_Drop\_Structure.xlsx, may be accessed at the following location:

<http://www.ia.nrcs.usda.gov/technical/design/program.html>

/s/Richard Sims  
State Conservationist

Attachment