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IOWA DEPARTMENT OF TRANSPORTATION

To Office Bridges and Structures Date October 1, 2009

Attention All Employees Ref No. 521.1

From Gary Novey

Office Bridges and Structures

Subject Revision of the English Bridge Standards Series H40-06.
(CADD M0157)

The revised standards are located in the H40-06.dgn files. Electronic copies are available in the following Office of Bridges and Structures standard directory **W:\Highway\Bridge\Standards\Bridges** and on the Internet:

http://www.iowadot.gov/bridge/standard.htm

Note: Standard sheets H40-17-06, H40-24-06, and H40-31-06 were not revised.

1. Index and Notes: H40-01-06 and H40-02-06.

    a. The T-Pier Notes were revised to the LRFD specifications.
    b. References to the Iowa DOT Construction Specifications were revised for the new 2009 series.
    c. The index of sheets was revised for the additional substructure sheets.

2. Superstructure Details: H40-03-06 and H40-04-06.

    a. A note was provided to clarify the use of the double drip groove for open rails only.
    b. The details and notes for the Concrete Sealer Limits on the Open Rails were revised to show increased sealing limits.
    c. References to the Iowa DOT Construction Specifications were updated for the new 2009 series.

3. Abutment Details (all skews): H40-05-06, H40-06-06, H40-11-06, H40-12-06, H40-18-06, H40-19-06, H40-25-06, and H40-26-06

    a. Piling number and design loads were revised to meet the LRFD Specifications.
    b. The abutment wing was revised to the new office standard.

4. Longitudinal Section (all skews): H40-07-06, H40-08-06, H40-13-06, H40-14-06, H40-20-06, H40-21-06, H40-27-06, and H40-28-06

a. The wing details were revised to the Office of Bridges and Structures' new standards.
b. Details A was revised to show the centerline of bearing for the prestressed beams.

5. Superstructure Details (all skews): H40-09-6, H40-15-06, H40-22-06, and H40-29-06

    a. The Estimated Quantities and Concrete Placement Quantities were revised to include changes to piling, prebore, reinforcement, and concrete quantities in the detail sheets.
    b. The concrete placement note was revised.

6. Deck & Abutment Reinforcement. (all skews): H40-10-6, H40-16-06, H40-23-06, and H40-30-06

    a. The wing and abutment reinforcing quantities were revised to include changes in reinforcement quantities in the detail sheets from the wing revisions and changes in piling number.

7. A, B and C Beam Details: H40-32-06 to H40-37-06

    a. Beam notes were revised to the 2007 LRFD specifications, 4^{th} ed.
    b. The beam details were revised to agree with the office's standards.
    c. References to the Iowa DOT Construction Specifications were updated for the new 2009 series.

8. Intermediate Steel Diaphragms: H40-38-06

    a. Minor revisions were made to the sheet to agree with the office's standards.

9. Barrier Rail Details: H40-39-06 to H40-41-06

    a. The end section was revised to agree with the new office standard.
    b. References to the Iowa DOT Construction Specifications were updated for the new 2009 series.
    c. The reinforcement and concrete quantities were revised due to the revisions.

10. Open Rail Details: H40-42-06 and H43-43-06

    a. The end section was revised to agree with the new wing details.
    b. References to the Iowa DOT Construction Specifications were updated for the new 2009 series.
    c. The reinforcing and concrete quantities were revised due to the revisions.
    d. View A-A and Section B-B were added.

11. Pier Bearing Details (all skews): H40-44-06

    a. The bearing details were revised to agree with the revised office standards, which included the shear stud details and revised keeper bar details.

12. Pile Bent Piers (all skews): H40-45-06, H40-46-06, H40-48-06, H40-49-06, H40-51-06, H40-52-06, H40-54-06, and H40-55-06

    a. Sheets were revised to meet the LRFD specifications.
    b. In the pile table, LRFD design bearing values were added for piling design.
    c. Pile orientation details were added.

13. Pile Bent Piers HP14 Piles (all skews): H40-47-06, H40-50-06, H40-53-06, and H40-56-06

    a. New sheets were added for the 14 in. pile option, which were designed using the LRFD specifications.
    b. Pile cap depths were increased to 3 ft – 6 in.

14. T-pier Cap and Column (all skews): H40-57-06, H40-58-06, H40-65-06, H40-66-06, H40-73-06, H40-74-06, H40-81-06, and H40-82-06

    a. Sheets were revised to meet the LRFD design specification.

15. T-Pier, Steel Pile Footing, 50 Tons, 6 ksi service (all skews): H40-59-06, H40-60-06, H40-67-06, H40-68-06, H40-75-06, H40-76-06, H40-83-06, and H40-84-06

    a. Sheets were revised to meet the LRFD design specifications.

16. T-Pier, Steel Pile Footing, 75 Tons, 9 ksi service (all skews): H40-61-06, H40-62-06, H40-69-06, H40-70-06, H40-77-06, H40-78-06, H40-85-06, and H40-86-06

    a. Sheets were added for a 75 ton steel pile option, which was designed to meet the LRFD design specifications.

17. Spread Footing (all skews): H40-63-06, H40-64-06, H40-71-06, H40-72-06, H40-79-06, H40-80-06, H40-87-06, and H40-88-06

    a. Sheets were revised to meet the LRFD design specifications.

18. Subdrains Details: H40-89-06

    a. The Granular Backfill Detail was deleted and a note was added referring to the Abutment Backfill details not shown on this sheet.

19. Wing Armoring Details: H40-90-06 and H40-91-06

    a. References to the Iowa DOT Construction Specifications were updated for the new 2009 series.

20. Abutment Backfill Details: H40-92-06 to H40-95-06

    a. The sheet was revised to meet the Office of Bridges and Structures standards for floodable backfill.

If you have any questions about these revised standards, please check with Thayne Sorenson or Dean Bierwagen.

GAN/dgb/bj