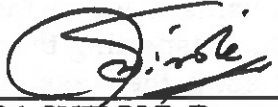


TO: <p style="text-align: center;">SUPERSEDED BY <u>EI 05-034</u> EFFECTIVE 10/18/2005</p>	<h2 style="margin: 0;">ENGINEERING INSTRUCTION</h2> <p style="margin: 0;">NEW YORK STATE DEPARTMENT OF TRANSPORTATION</p>
Distribution: <input checked="" type="checkbox"/> Main Office <input checked="" type="checkbox"/> Regions <input checked="" type="checkbox"/> City, Town, County <input checked="" type="checkbox"/> Consultants <input type="checkbox"/> Special	Code: <u>94-004</u>
APPROVED:  <u>3/11/94</u> ARUN M. SHEROLE, Deputy Chief Engineer (Structures)	Date: <u>March 17, 1994</u> Supersedes: Page 3 of EI 81-25

This Engineering Instruction modifies and redefines the Department's procedure for Load Rating Bridges. It is divided into two parts.

- I THE PROCEDURE FOR LOAD RATING DIFFERENT GROUPS OF BRIDGES
- II THE RESPONSIBILITY FOR RECORDING AND TRANSFERRING DATA

This E.I. establishes that existing bridges will have a Level 2 Load Rating performed only when there is a significant change in the structure or the rating is six years old or older. Also, when a significant change to the structure occurs any existing Level 1 Rating must be removed or recalculated.

For Load Rating considerations, bridges are divided into 3 groups:

- GROUP A. NEW, REPLACEMENT OR SUPERSTRUCTURE REHABILITATED BRIDGES
- GROUP B. EXISTING NON-POSTED BRIDGES
- GROUP C. POSTED-BRIDGES (BOTH "R" AND "LOAD" POSTED) OR PRIMARY MEMBER RATING < 3

The Load Rating procedure is different for the three groups.

Subject: LOAD RATING PROCEDURE FOR NEW AND EXISTING BRIDGES

I PROCEDURE FOR LOAD RATING BRIDGES

GROUP A. These bridges receive a Level 1 Load Rating in accordance with the Uniform Code of Bridge Inspection. These bridges will also have Level 2 Load Rating input forms completed. For bridges designed by the Department or the Department's Consultant, the Level 2 Input Forms are to be completed by the Designer. The inspector will then confirm and/or correct the information on the forms during the first inspection after work is completed. For bridges not designed by the Department or the Department's consultants or where the input forms were not completed by the designer, the individual inspecting the new or rehabilitated structure shall be responsible for completing the Level 2 Input Forms.

GROUP B. These bridges should already have Level 2 Data on file and may have an existing Level 1 Rating. The Level 2 Rating Input Data shall be updated by the Bridge Inspector when there is any change in Dead Load (New Deck, Overlay, Railing, etc.), or a change in primary member section area greater than 10 percent since the last time the Rating was computed. The inspector notes these changes on the Data File Listing sheet. If the Level 2 Rating is 6 years old or older, the Data File Listing shall be updated. This update will insure that the Bridge's Computed Rating will reflect any modifications made to the Level 2 Load Rating Computer Program since the last time the Data File was run. This "age" criteria shall also apply to Level 2 "Unratable" Bridges that have a Data File Listing. The rating date is located at the end of the "Rating" lines at the end of the Data File Listing.

Significant changes that would require the Level 2 Rating program to be re-run should also cause an existing Level 1 Rating to be reviewed and updated or invalidated if necessary. For bridges owned by the Department, the Regional Bridge Evaluation Engineer (RBEE) shall evaluate the existing Level 1 and Level 2 Ratings and forward any modifications of the values to the Central Office Bridge Safety Assurance Unit (COBSA). For bridges not owned by the Department, the individual responsible for re-running the Level 2 Analysis shall notify the Regional Bridge Management Engineer (RBME) of the change in the Level 2 Load Rating. The RBME will notify the Local Bridge Owner of the changes to the Bridge and ask that they review and update the existing Level 1 Load Rating. When there are changes in a Bridge's Rating (Level 1 or Level 2), the existing Load Posting criteria must also be checked.

Bridges that do not have a Level 2 data file shall have input forms completed by the bridge inspector.

Subject: LOAD RATING PROCEDURE FOR NEW AND EXISTING BRIDGES

GROUP C. The load capacity of these bridges need to be monitored more closely than that for Non-Posted (Group B) bridges. The Level 2 Load Rating shall be re-computed when there is any change in dead load or a change in primary member section area greater than 5 percent since the last computed rating. The remaining procedures are identical to the Group B bridges.

A table describing the load rating of the three bridge groups is attached.

II RECORDING AND TRANSFERRING DATA

A. GROUP A BRIDGES

1. Bridges Let by the State. A Load Rating package shall be prepared by the bridge designer. This package shall consist of Level I load rating calculations, including 2 rating summary sheets and one set of completed Level 2 Load rating input forms. The Level I Load Rating shall be prepared in conformance with the Uniform Code of Bridge Inspection, Section 165.8 - Load Rating Evaluation. The summary sheet and calculations shall be signed by the designer and checked. This package shall be sent to the RBME for inclusion in the BIN folder sometime between PS&E and the contract letting date of the bridge.

During the bridge's first inspection, the inspector will confirm and/or correct the Level 2 Load Rating input data to reflect the "As-Built" condition. The inspector then submits the signed and dated load rating input forms to the Regional Bridge Evaluation Engineer (RBEE). The RBEE forwards a copy of the load rating input forms to the Central Office Data Entry Unit (keypunch). The COBSA Unit will place the data in the load rating database and notify the Region. The RBEE or person responsible for reviewing Level 2 Load Ratings, shall check the data file for key punch or other errors. Any errors shall be corrected on the data file and the load rating program run. When the load rating is acceptable, the data file shall be placed in a holding file using the established update procedures. The RBEE will then notify the COBSA Unit of the data files to be transferred.

The COBSA Unit will update the Load Rating lines in the Load Rating Database (Masterfile).

After the Level 2 updating is complete, a new data file listing and output file shall be produced and placed in the bin folder for the next inspection.

Subject: LOAD RATING PROCEDURE FOR NEW AND EXISTING BRIDGES

2. Bridges Not Let by the State. The designer of the bridge is responsible for preparing and filing the Level 1 Load Rating in conformance with the Uniform Code of Bridge Inspection, Section 165.8 - Load Rating Evaluation. The designer of the bridge shall file the Level 1 Load Rating by submitting two signed copies of the rating calculations and summary sheets to the RBME. Level 2 Load Rating input forms shall be completed by the inspector during the bridges first biennial inspection. The inspector then submits the signed and dated load rating input forms to the RBEE. The remainder of the procedure is the same as for Group A Bridges let by the State.

B. GROUP B AND C BRIDGES

1. A Level 2 Data File Exists. If the inspector determines that Level 2 updating is not required because there is not a significant change in the structure or the date of the last rating is less than 6 years old, the team leader shall sign, date and note on the "Data File Listing" that updating is not necessary. The "Data File Listing" shall be returned to the bin folder.

If the inspector determines that updating of data is required, the team leader shall mark the changes, and sign and date the "Data File Listing". The inspector submits the updated "Data File Listing" to the responsible person who will update the datafile and run the load rating program. The remainder of the procedure will be the same as for Group A Bridges Let by the State.

2. A Data File or Load Rating Input Data is Not Available. Level 2 Load Rating input forms shall be completed by the inspector. The inspector submits the signed and dated forms to the RBEE. The remainder of the procedure is the same as for Group A Bridges Let by the State.

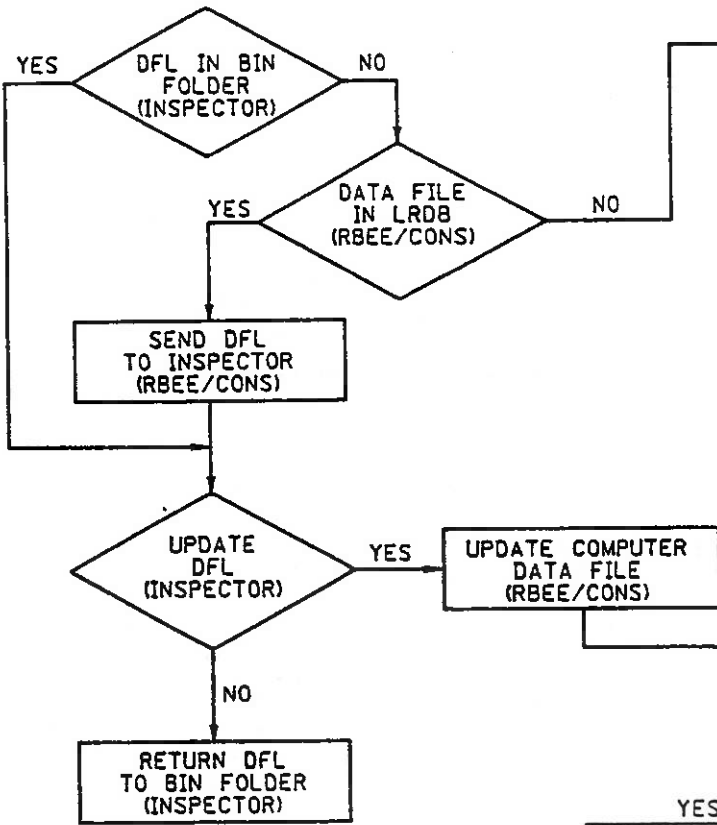
A flow chart describing the recording and transferring of data is attached.

LOAD RATING BRIDGES

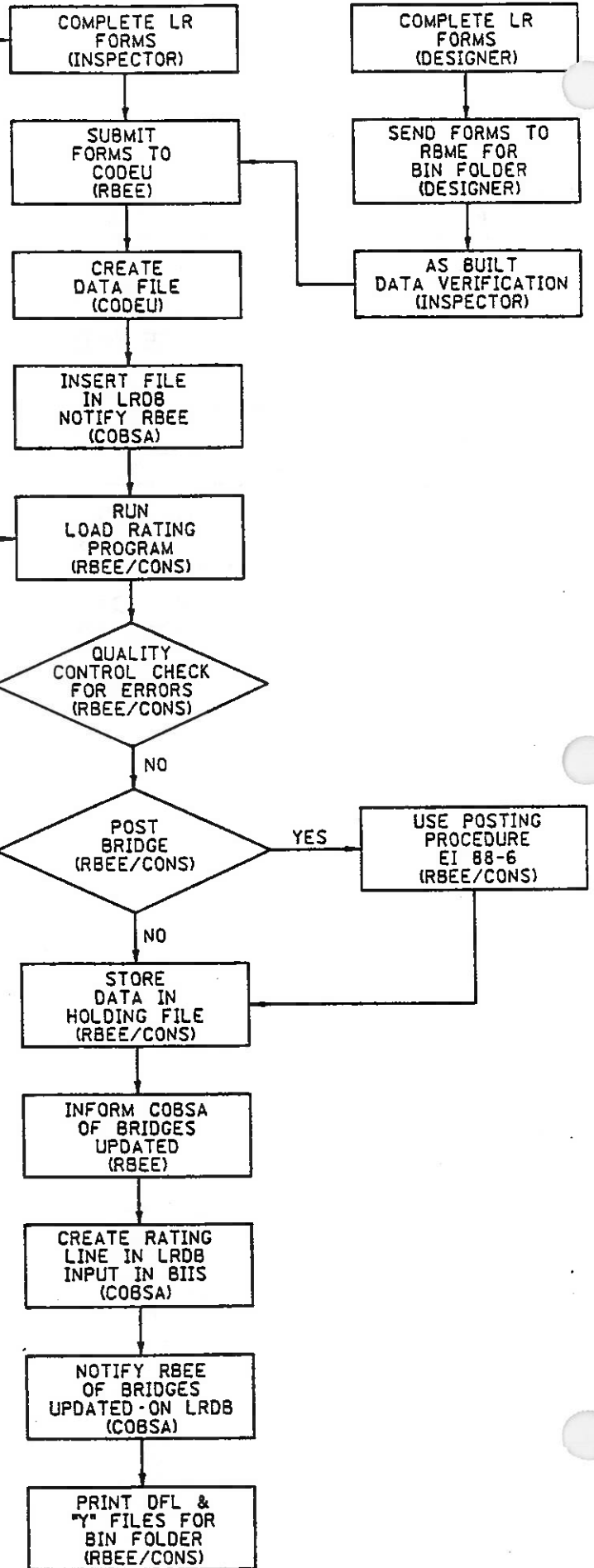
GROUP	CRITERIA	RESULTS
A	NEW OR REHABBED SUPERSTRUCTURE	LEVEL I AND LEVEL 2 LOAD RATING
B	CHANGE IN DEAD LOAD OR CHANGE IN SECTION > 10% OR RATING DATE \geq 6 YRS. OLD	RERUN LEVEL 2 REVIEW LEVEL I
C	CHANGE IN DEAD LOAD OR CHANGE IN SECTION > 5% OR RATING DATE \geq 6 YRS. OLD	RERUN LEVEL 2 REVIEW LEVEL I

RECORDING & TRANSFERRING LEVEL 2 LOAD RATING DATA

GROUP B & C



GROUP A



LEGEND	
BIIS	- BR. INV. & INSP. DATABASE
COBSA	- C.O. BRIDGE SAFETY ASSURANCE
CONS	- CONSULTANT
CODEU	- C.O. DATA ENTRY (KEYPUNCH)
DFL	- DATA FILE LISTNG
LR	- LOAD RATING
LRDB	- LOAD RATING DATABASE
RBEE	- REGIONAL BR. EVALUATION ENG.
RBME	- REGIONAL BR. MANAGEMENT ENG.
()	- PARTY RESPONSIBLE
◇	- DECISION
□	- PROCESS