HiCAMS User Guide

Chapter 13:

Project Closeout

Section 1:

Review Construction Quality Index (CQI)

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Revision History

Comments or concerns with this document should be directed to the NCDOT Construction Unit at 919-707-2400.

Date	Version	Description	Author
November 2012	1.0	Initial Version	Marie Novello
December 2012	1.1	Updated definitions (Evaluate button) and added Known Problems	Marie Novello

About the Construction Quality Index

The Construction Quality Index form was devised to provide feedback on a consistent set of design and construction criteria. The CQI is done in conjunction with and does not replace the Twelve Month Warranty Review.

The Construction Quality Index (CQI) Evaluation is an evaluation of all centrally let contracts with the exception of resurfacing contracts. This evaluation provides a mechanism to determine if there are specific construction elements that are causing maintenance related issues after the final acceptance of a project. The evaluation also provides a method to identify potential needed changes to the standard design details or specifications.

The CQI evaluation review should be performed approximately 10 months after the acceptance of a project. This review should coincide with the 12 Month Project Guarantee review for those projects that require both reviews.

The CQI reviews are typically performed by the Division Construction Engineer (DCE), Division Maintenance Engineer (or assigned delegate), Resident Engineer, and the Roadway and/or Bridge Construction Engineers. Each person reviewing the project should evaluate the project individually and record his or her ratings on the Construction Quality Index Evaluation Form in HiCAMS.

The DCE is generally responsible for setting the status of the CQI to Completed in HiCAMS.

The Construction Quality Index is also a component of Division staff performance measures.

For additional information about the Construction Quality Index, please contact the Construction Unit.

Entering Construction Quality Index data

Construction Quality Index (CQI) data can be entered by one person for all the Evaluators, or by each Evaluator. Once the Evaluation Data is entered, the CQI is set to Completed.

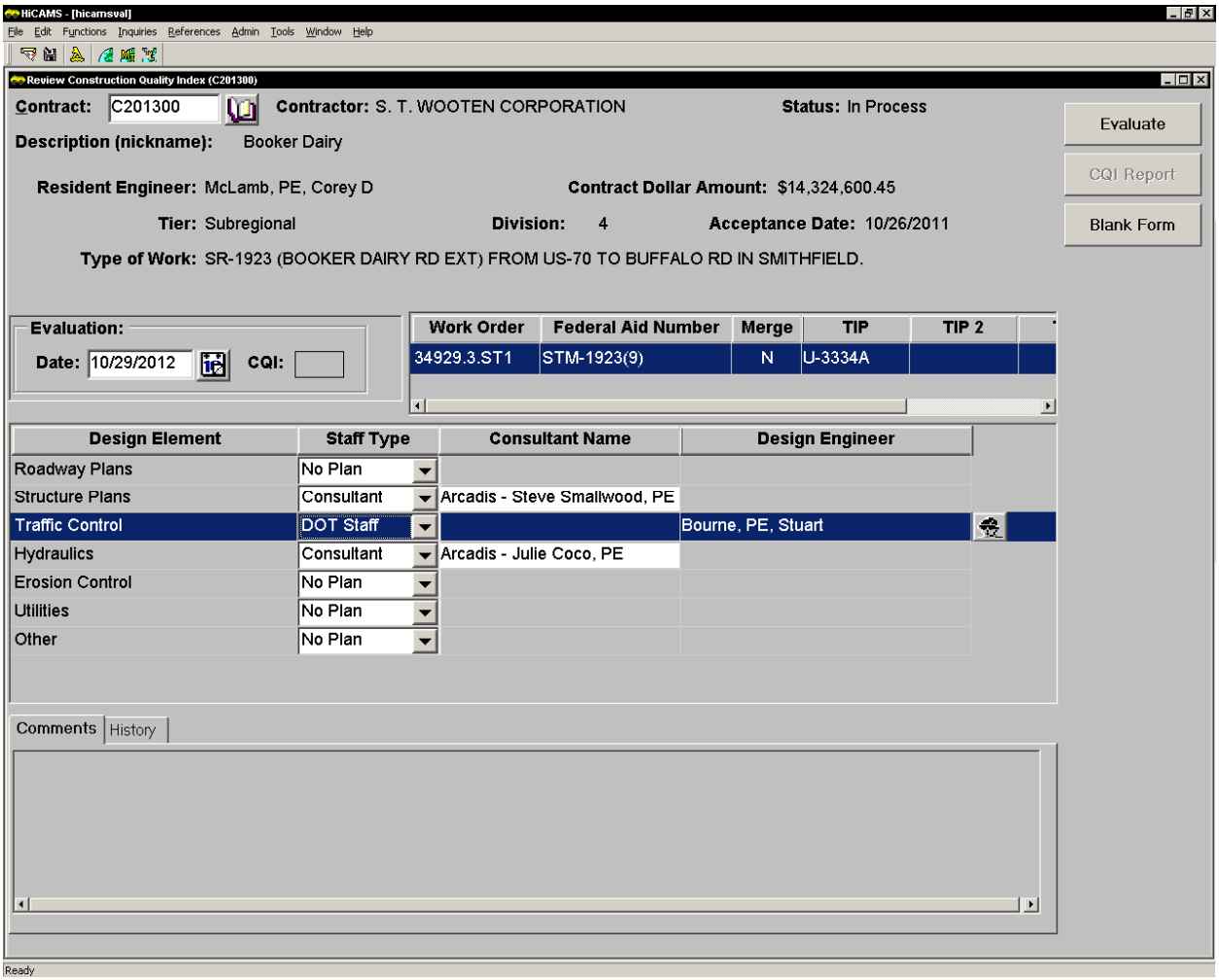
Entering the Contract Data

To enter CQI evaluation results, go to **Functions > Project Closeout > Review Construction Quality Index (CQI)**.

Step 1: Enter the Contract Number for which you wish to enter an evaluation. The information that corresponds to the contract appears in the lower portion of the window.

> ***Note:*** *For information on ways to enter your contract number, see the User Guide "Getting Started" in the User Guides section of the HiCAMS home page.*

An example of the Review CQI main window is displayed below.



Step 2: If the **Evaluation Date** is NOT today, enter the correct date.

Step 3: Enter the **Staff Type** and **Consultant Name** or **Design Engineer** for each Design Element that is part of the contract. The options for Staff Type are No Plan (default), DOT Staff, or Consultant.

If the plans were done by a Private Engineering Firm/Consultant, select Consultant from the dropdown list. Enter the Firm Name and/or PE in the Consultant Name field.

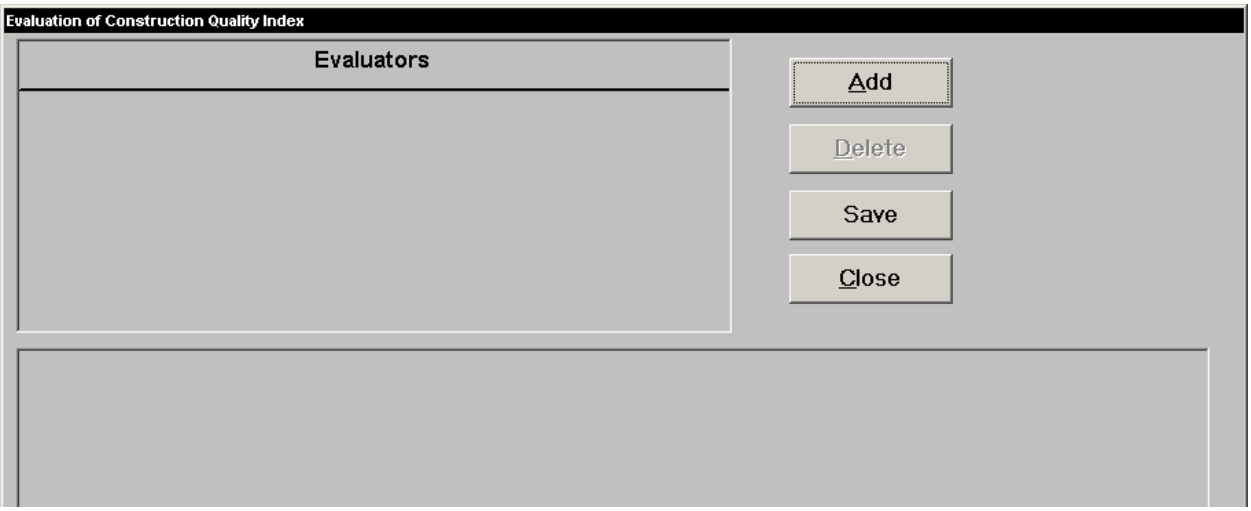
If the plans were done by DOT Staff, select DOT Staff from the dropdown list. Select the DOT Design Engineer by clicking on the Staff Icon.

> ***Note:*** *If the name of the Design Engineer you need is not on the staff listing, please contact the Construction Unit.*
>
> ***Note:*** *The default Staff Status is Active. If the DOT design engineer is no longer with NCDOT, the engineer can still be selected by setting the Staff Status to ALL and searching again.*

The initial information about the contract has now been entered. At this point, the record can be Saved for future use, or the Evaluations can be entered if the project has been reviewed.

Adding Evaluators

To enter an Evaluation for the contract, click on the Evaluate button in the upper right corner of the window. The Evaluation dialogue box opens. A portion of this is shown below:

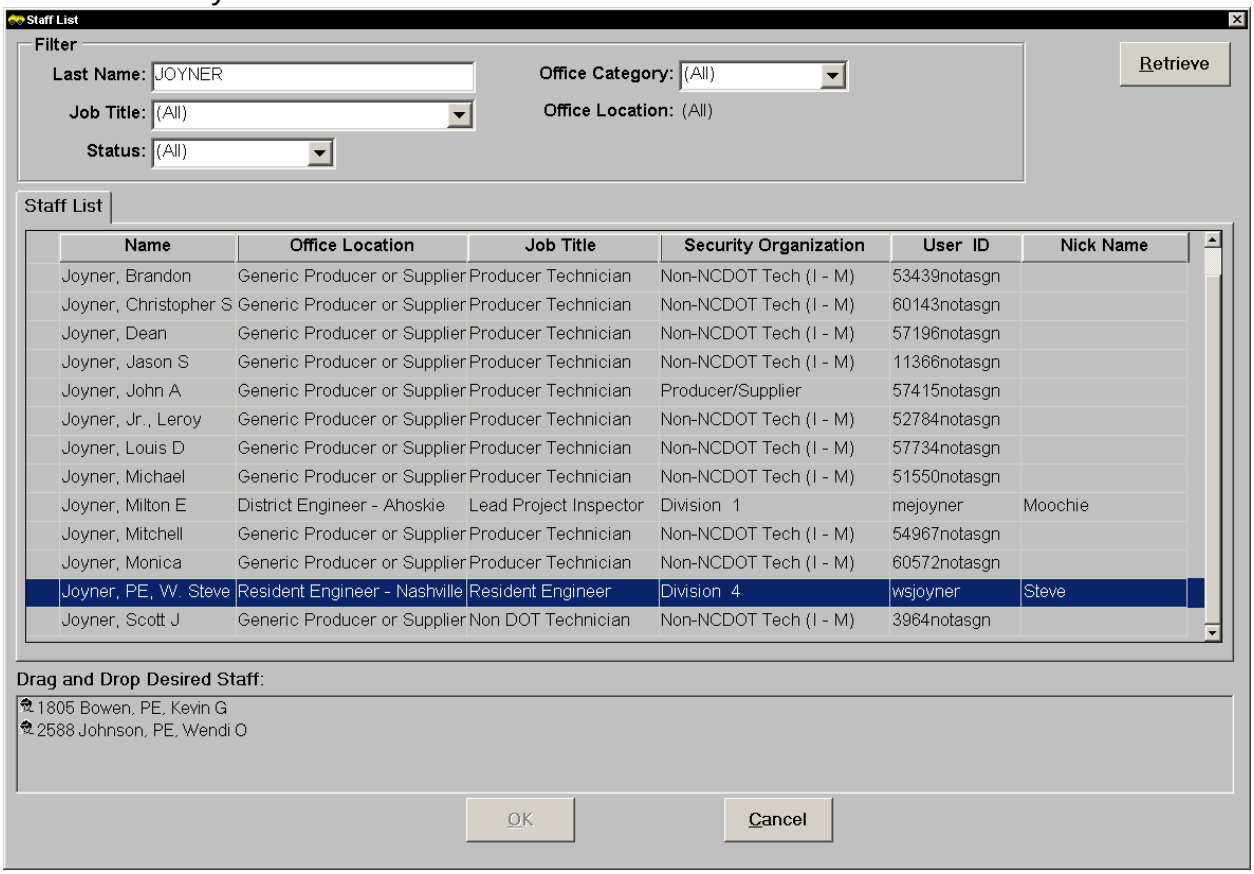


Step 4: Enter the Evaluators. The Evaluators can all be entered at one time, or each Evaluator can enter his or her name.

Enter an Evaluator by clicking on the Add button. The Staff List window opens. Search for the Evaluator name, select it in the upper grid, and drag it to the lower grid.

If another Evaluator needs to be added, replace the last name used for searching, Retrieve the new list, and drag the second and subsequent Evaluators to the lower grid.

An example of the Staff List with two Evaluators already selected and the third Evaluator ready to select is shown below:



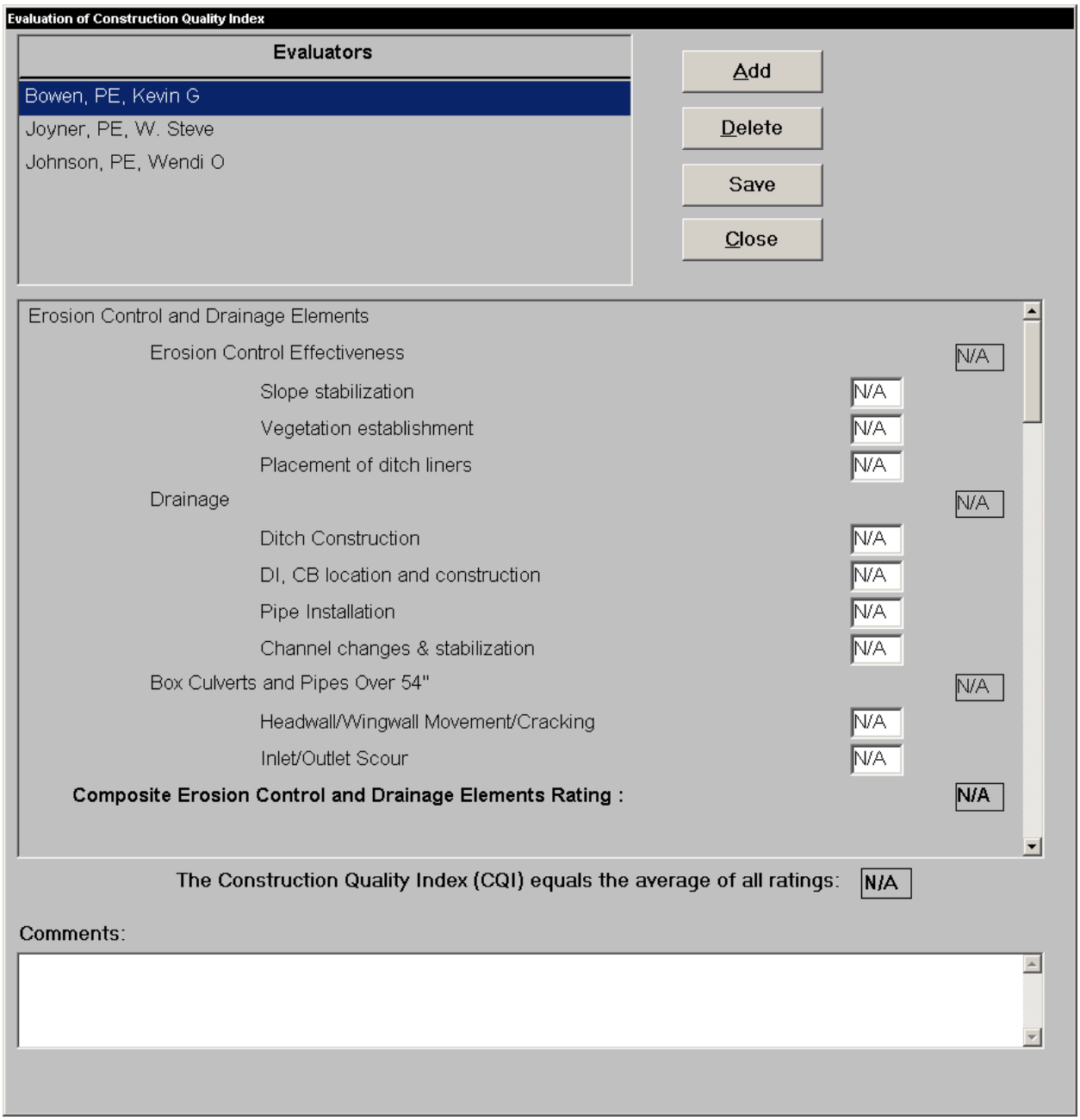
Step 5: When all the Evaluators have been selected, click the OK button to enter the Evaluators. Part of the Evaluation Window after the Evaluators have been added is shown on the next page.

> ***Note:*** *If an Evaluator is entered in error, use the* ***Delete*** *button to remove the name and associated evaluation.*
>
> ***Note:*** *If an Evaluator needs to be added after the initial selection process, click the* ***Add*** *button again, and select the additional staff.*

Entering the Evaluation

Step 6: Select the Evaluator whose results need to be entered from the Evaluator list.

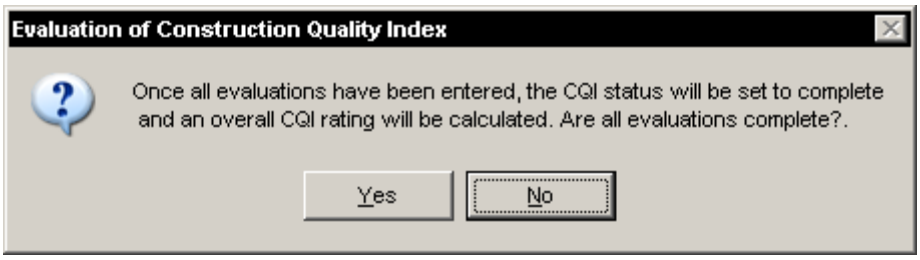
> ***Note:*** *All evaluators should be listed even if only one set of scores will be entered. If only one set of data is being entered, please enter a note stating that in the Comments box.*



Step 7: Enter the evaluations for each element that has been rated. Skip the items that were not rated. It is possible to use either the Enter key or the Tab key to navigate through the list.

Step 8: Enter any evaluator **comments**.

Step 9: When the first evaluator's data has been entered, click the Save button. The following message will be displayed:



Step 10: If only one set of evaluation data will be entered, select the Yes button to complete the CQI rating. If another set of evaluation data will be entered, select the No button to close the window. Select the next evaluator and repeat the process until all data has been entered.

Step 11: When all evaluation data has been entered, select Yes when saving. The evaluation window will become display only, and the status of the CQI will change to Complete. Close the Evaluation Entry window.

Known Problem
If you do not choose Yes when the last evaluation has been entered, please contact the Construction Unit for assistance to have the CQI set to Complete. The security to do this should be available to users with access to the window, and the correction will be part of the next release.

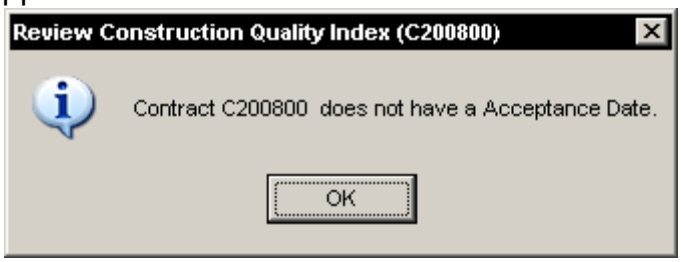
Step 12: If desired, a copy of the summary Construction Quality Index can be printed by clicking the CQI Report button.

Known Problem
If the CQI report does not contain the evaluation data, please contact the Construction Unit for assistance. This problem is being corrected.

Step 13: If the report is set to Complete in error, please contact any of the Construction Unit Engineers. Once the status is set back to In Process, any changes or additions can then be made to the data.

Other Error Messages

If a contract number for a contract that has not been Accepted is entered, the following error message will appear:

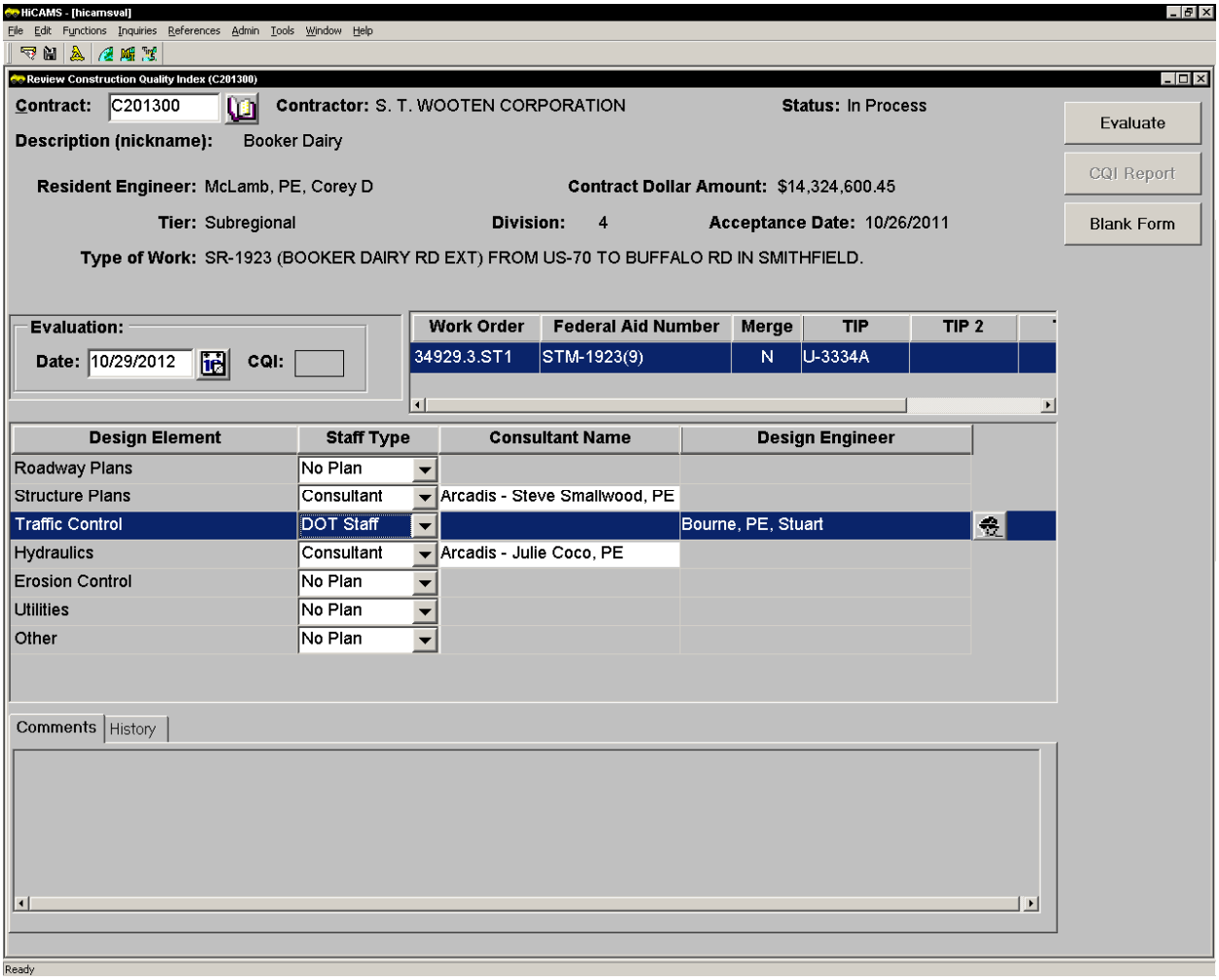


Construction Quality Index data is only entered for Accepted projects.

Appendix:
Window Definitions - Construction Quality Index

To work enter CQI evaluation results, go to **Functions > Project Closeout > Review Construction Quality Index (CQI)** and enter the contract number for the project being evaluated.

Below is an example of the Construction Quality Index window after the Design Element Data has been entered:



Field Definitions for the CQI Window

Contract: A unique number assigned by Contract Standards Unit for contracts with a C prefix, or by the Division for contracts with a D prefix.

Status: The two statuses for a CQI are In Process and Completed. Completed CQIs can be set back to In Process by users with the appropriate security.

The following fields are derived from the Contract Details window:

Contractor: The Vendor who was awarded and subsequently executed the Contract.

Description (Nickname): The name the office uses when referring to the project.

Resident Engineer: The name of the primary Contract Administrator assigned to the project.

Contract Dollar Amount The Bid amount of the Contract.

Tier: The category to which the roads in the contract are assigned.

Division: The division that administered the contract.

Acceptance Date: The date the Contract was accepted as complete.

Type of Work: The location description from the contract letting documents.

Evaluation Date: The date the CQI information was gathered in the field. If the evaluations were performed at different times, use the latest date.

CQI: The score calculated by averaging the ratings for each evaluation data point. This may or not be the same as the average of each evaluator's average.

Column Definitions for the CQI Window WBS box

Work Order: The WBS elements to which the contract work was charged.

Federal Aid Number: The Federal Aid Number assigned to the WBS element.

Merge: An "**N**" in this column indicates that the WBS was used for charges. A "**Y**" indicates that the WBS element was not used for charges and that its line items were combined into another WBS element for charges.

TIP, TIP 2, TIP 3, TIP 4: Displays the primary TIP associated with the WBS element and any additional ones assigned.

Column Definitions for the CQI Design Elements box

Design Element:: The various major types of work that can be included on a contract. Specialty plans are entered as **Other**.

Staff Type: The choices for this drop down are No Plan, DOT Staff, and Consultant.

Consultant Name: If a Private Engineering firm's Engineer sealed the plans for the design element, type in the name of the firm and the sealing engineer in this column. Otherwise, leave this field blank.

Design Engineer: If DOT Staff sealed the plans for the design element, use the staff selection icon to populate the name of that engineer. Otherwise, leave this field blank.

Definitions for the CQI Tabs

Comments: This is a display only tab. Comments are entered with each evaluation and shown here with the name of the evaluator who made the comment.

History: The History tab tracks changes to Status, Creation of Evaluations, and Modification of Evaluations. Since data entry can be done on your behalf, and is accessible for changing, tracking the modification of an evaluation provides a way for evaluators to see if their data entry has been changed by someone else.

Button Functions for the CQI Window

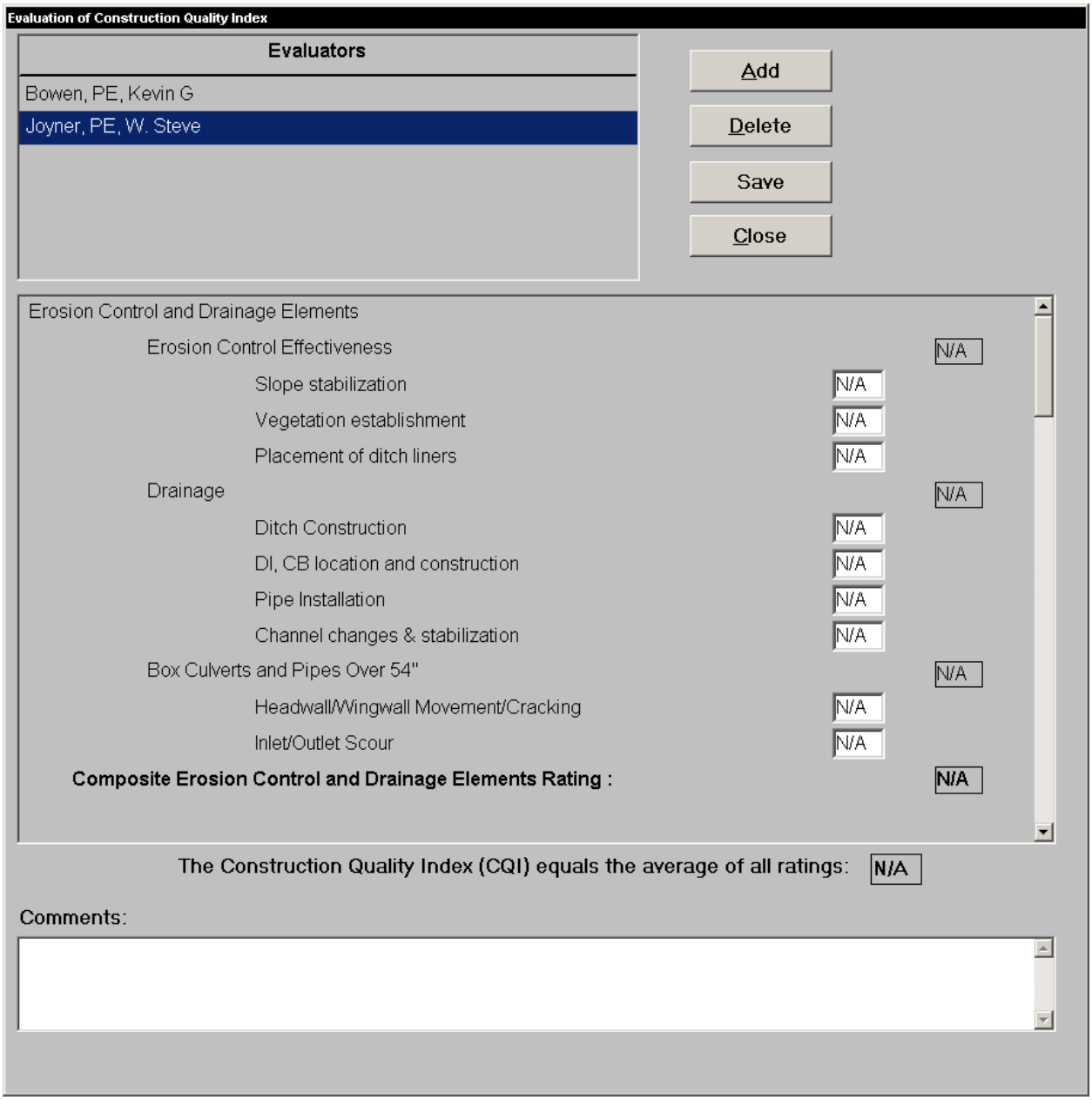
Evaluate: The button clicked to access the Evaluation results window. If the CQI status is complete, the results are View Only.

CQI Report: The button clicked to print a copy of the Completed CQI report. The button is inactive when the status of the CQI is In Process.

Blank Form: The button clicked to access a contract specific blank evaluation form.

Window Definitions - CQI Evaluation Window

Below is an example of the Construction Quality Index Evaluation window after two Evaluators have been entered:



Button Functions for the CQI Window

Add: The button clicked to open the Staff Selection window and add staff to the Evaluation results window.

Delete: The button clicked to remove previously selected Staff from the list of Evaluators.

Save: The button clicked to commit the Evaluator information to the database. When this button is selected, the user is also given the opportunity to set the CQI status to Complete.

Close: The button clicked to close the Evaluator window without setting a CQI Status. However, if data has not been previously Saved, the Save dialogue will be brought up if data exists that has not been Saved.

Field Definitions for the CQI Window

For information about the CQI form components, please contact the Construction Unit.

Comment: Individual Evaluators may enter comments for inclusion by typing in this box. The Comments will display on the main CQI window with the name of the Evaluator to which they are assigned.