

DATE: September 13, 2023
TO: Highway Structures Information System (HSIS) Users
FROM: DTSD – Bureau of Structures
SUBJECT: **September 2023 HSIS update**

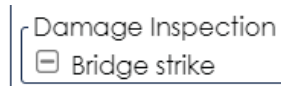
A new version of HSIS was released on 9/12/2023. The following is a list of some of the enhancements added and bugs fixed in this release. This is not an exhaustive list.

If you discover any bugs or have suggestions for enhancements, please email ryan.bowers@dot.wi.gov. If you do find a bug, please provide as much information as possible about what structure you were working on, what browser you used, if you were using a mobile device or not, items you were editing or clicking on prior to the bug occurring, etc. The more information you provide, the better chance we have at replicating the issue, determining the cause, and fixing it. Any screenshots or videos you can take are helpful.

Enhancements

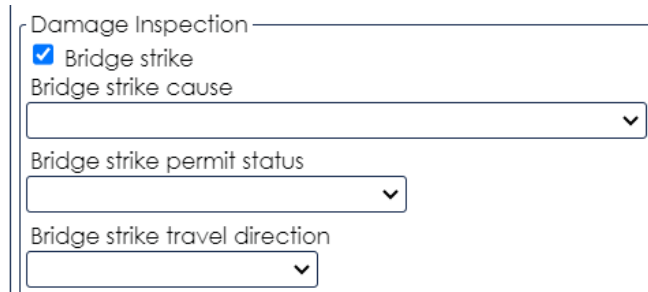
Additional data fields for damage inspections

New data fields were added for damage inspections. The new fields are located on the NBI/Notes/Requirements tab. If the damage is due to a bridge strike, the “Bridge strike” checkbox on the NBI/Notes/Requirements tab will need to be checked. If the damage is due to something else, the checkbox will need to be unchecked in order for the inspection to be submitted. You will need to check the box before being able to uncheck it.



“Bridge strike” checkbox at inspection creation

When “bridge strike” is checked, three additional dropdowns appear. The inspection cannot be submitted until these three fields are populated. If bridge strike is not checked, these fields are not required.

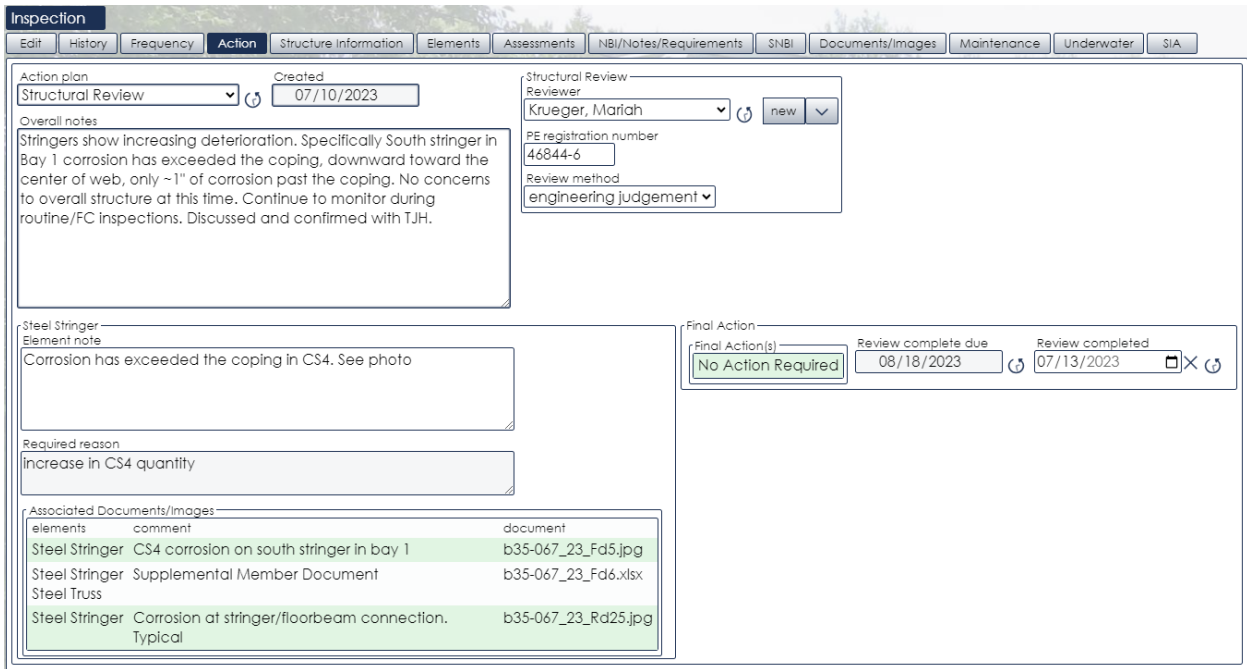


Additional data fields when “bridge strike” is checked

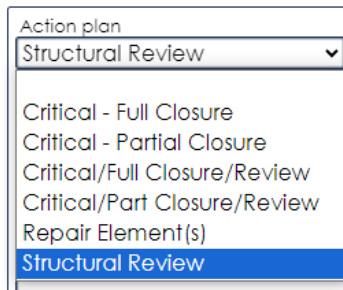
Critical findings and structural review

The new NBIS required changes to the critical finding policy. To address the new requirements, a new critical finding tab was created, and the critical finding options were removed from the “action” tab. The changes to critical findings and action tab will be described in the following paragraphs.

A screenshot of the action tab in the previous HSIS release is shown below. Users could select an “action plan” from the dropdown. The action plan had six options, shown in the second image below. Four of the options included critical finding. Because of the decisions to create a separate critical finding tab and to remove “repair element(s)” from the action plan dropdown, the action plan dropdown is no longer necessary. The previous action tab has been simplified and renamed “structural review”. A screenshot of the new structural review tab can be seen on the following page.



Previous “action” tab



Previous “action plan” options

Inspection

Edit History Frequency **Structural Review** Structure Information Elements Assessments NBI/Notes/Requirements Documents/Images Maintenance Unde

Created: 07/17/2023

Overall notes: One timber cap reading at 35% decay CS4. Girders bear directly above piles, and decay is between piles. Concrete diaphragm helps distribute loads to span over decayed areas. Most of pile cap is in good condition.

Structural Review
 Reviewer: Pence, Alex (new)
 PE registration number: 40925-6
 Review method: Structural Calculations

Timber Cap
 Element note: one reading at 35% decay CS4 South abutment.

Required reason: Increase in CS4 quantity

Final Action(s): No Action Required
 Review complete due: 08/21/2023
 Review completed: 08/18/2023

Associated Documents/Images:

elements	comment	document
Timber Pile	North Abutment	b49-527_23_0d1.jpg
Timber Cap		
Timber Pile	South Abutment	b49-527_23_0d2.jpg
Timber Cap		

New "structural review" tab

The new critical findings tab is shown below. Refer to the Structures Inspection Manual Part 1 Chapter 7 for more details on critical findings. Items including the critical finding date, type, description, and actions are recorded on the critical findings tab. Email addresses can be entered in the "Notifications" section, and a pdf of the critical finding sent to the addresses entered. A "send" button will appear after the email address and comment is entered and the user clicks elsewhere on the screen. Emails from HSIS do not eliminate the requirement for phone calls to program managers alerting them of critical findings.

Inspection

Edit History Frequency **Critical Findings** Structural Review Structure Information Elements Assessments NBI/Notes/Requirements Documents/Images Maintenance

UnderwaterProfile (demo)

Critical finding date: 08/16/2023
 Type: Superstructure Condition (B.C.02) <=2
 Inspector: Bohnsack, Dave (5015)

Close-out inspection required:

Critical finding description:

Actions:

#	Type	Action summary	Est complete	Complete
1	Planned		mm/dd/yyyy	08/dd/2023
	Final - Immediate		mm/dd/yyyy	08/dd/2023

Action type: add

Notifications:

#	Recipient	Comment	Date
	Adams(01) Program Manager Local Bridges chrisblum (Chris Bl		

view pdf

New "critical findings" tab

HSIS does not require the critical finding to be complete to submit the inspection. The critical finding can still be updated, actions added and completed, and the close-out inspection date selected (if required) after the original inspection with the critical finding is submitted.

General Inventory
 Bridge
 Inspection
 Create History Frequency Critical Findings

08/29/23 'CF, D'
 Critical finding date: 08/27/2023 Type: Partial Closure Inspector: McDaniel, Travis (9006)

Close-out inspection required
 Critical finding close-out inspection: 08/31/23 'INT'
 Critical finding description: Testing

#	Type	Action summary	Est complete	Complete
1	Planned	test 1	08/29/2023	08/31/2023 <input type="checkbox"/>
	Final - Immediate	test 2	09/05/2023 <input type="checkbox"/>	08/dd/2023 <input type="checkbox"/>

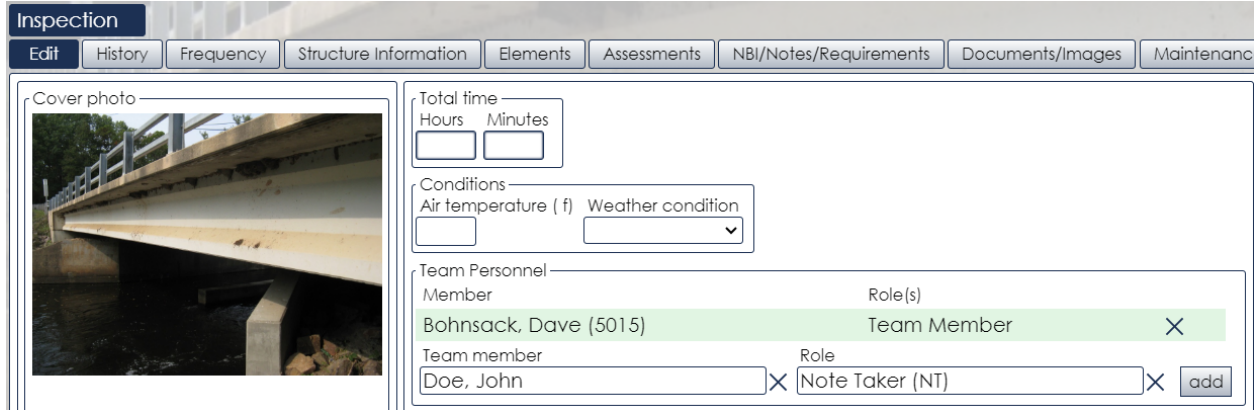
Action type:

Notifications

#	Recipient	Comment	Date
	Outagamie(44) Program Manager Local Bridges jjzellme (Joe Zellme)		

Team members

Previously, team members were entered in a free-form text box. The role of the team member was not always entered. The lack of consistency in entering this information made it difficult to search the data. Now, the team member can be selected from a dropdown or typed in. A set of roles has been defined and is available in a dropdown, or a new role can be typed in. Any team members or roles typed in are added to the dropdown for future use. If a role has numbers at the end of it (XX#), it was entered by a user. In the image below, Note Taker is followed by (NT), indicating it is not user defined.



The screenshot shows the 'Inspection' form with the following fields and data:

- Total time:** Hours: , Minutes:
- Conditions:** Air temperature (f): , Weather condition:
- Team Personnel:**

Member	Role(s)
Bohnsack, Dave (5015)	Team Member
<input type="text" value="Doe, John"/>	<input type="text" value="Note Taker (NT)"/>

add

New team member and role fields

If you type in a name or role and realize you made a mistake, do not use that entry. HSIS will automatically check for and remove any unassigned team members or roles on a regular basis.

If you had an inspection open with team member names entered when the new version of HSIS was released, the new team member dropdowns will not appear for that inspection. The team personnel box will look the same as it did in the previous version, as shown below. If you delete the text from the team personnel box and then "save", the new team member dropdowns will be available for use.



The screenshot shows the 'Inspection' form with the following fields and data:

- Total time:** Hours: , Minutes:
- Conditions:** Air temperature (f): , Weather condition:
- Team personnel:**

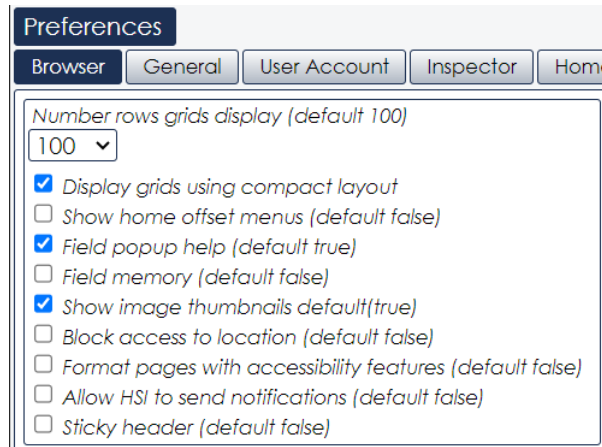
Nate Sippel, Dean Strey, Jim McDowell - A62

Shane McCarty, Steve Doocy, RJ Tilleman, Marc Roesler - Internal Walkthrough

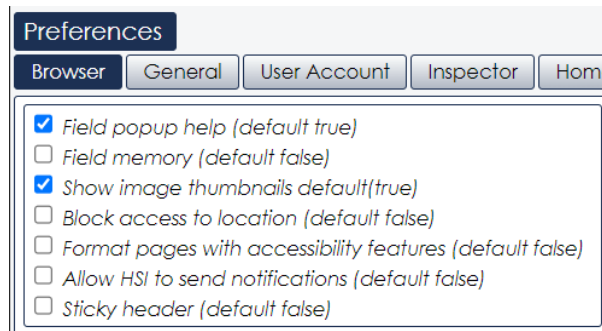
Team personnel entry in previous HSIS version.

Layout changes

The options available under Preferences > Browser were reduced. These options were moved to the HSIS home screen. See the images below for the Preferences > Browser screen before and after these changes.

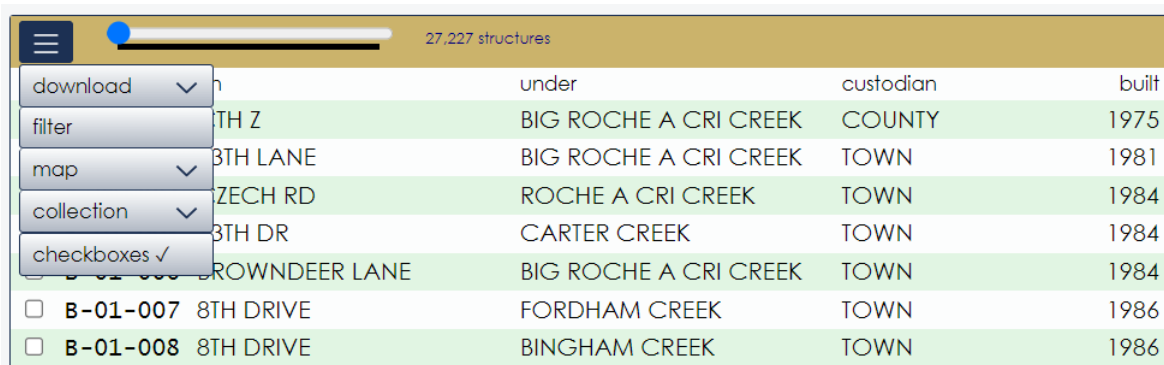


“Browser” options in previous version



“Browser” options in new version

The following images show the menu on the home screen from the previous and new version. Clicking “hide tools” will result in the tool buttons to the right of the structure count no longer being displayed, and the menu dropdown looking more like the previous version of HSIS.



Menu options in previous version

ID	Name	Location	Year
B-01-003	13TH LANE	BIG ROCHE A CRI CREEK	1981
B-01-004	CZECH RD	ROCHE A CRI CREEK	1984
B-01-005	13TH DR	CARTER CREEK	1984
B-01-006	BROWNDDEER LANE	BIG ROCHE A CRI CREEK	1984

Menu options and new tool buttons in new version

ID	Name	Location	Year	Type
B-01-007	8TH DRIVE	FORDHAM CREEK	1986	BRIDGE
B-01-008	8TH DRIVE	BINGHAM CREEK	1986	BRIDGE

Menu options with “hide tools” selected

Assist – maintenance items

“Extended criteria” in “assist” have been expanded to include “maintenance action” and “maintenance status”. One use for these options is to search for a specific maintenance action or status and then use inline editing to view and/or update as appropriate.

Extended Criteria

Maintenance status

- APPROVED
- ASSIGNED
- COMPLETE
- DEFERRED
- IDENTIFIED
- INFORMATIONAL

delete

Maintenance action

- AESTHETICS- APPLY ANTI-GRAFFITI COATING
- AESTHETICS- OTHER WORK
- AESTHETICS- POWER WASH
- AESTHETICS- RE-PAINT/RE-STAIN
- AESTHETICS- REMOVE GRAFFITI
- Approach - Mill Approach/Shoulder/Sidewalk

delete

Criteria

add

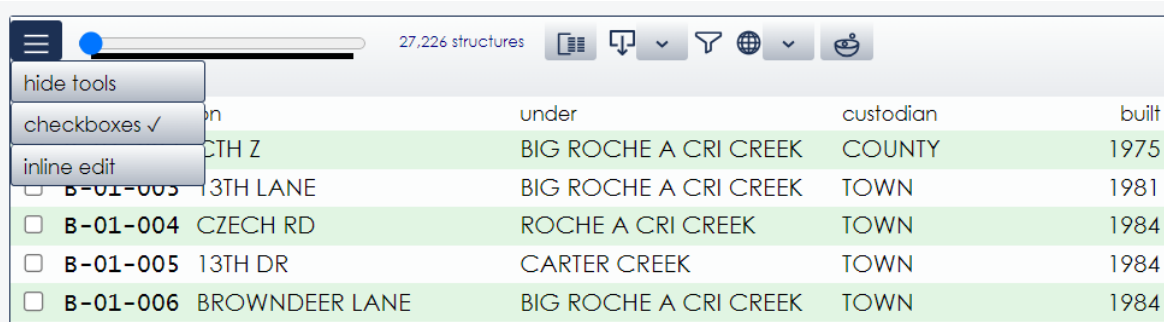
search
reset

dotryb • syst(12) • 23-7-3-7

New maintenance criteria available for use with assist

Inline editing

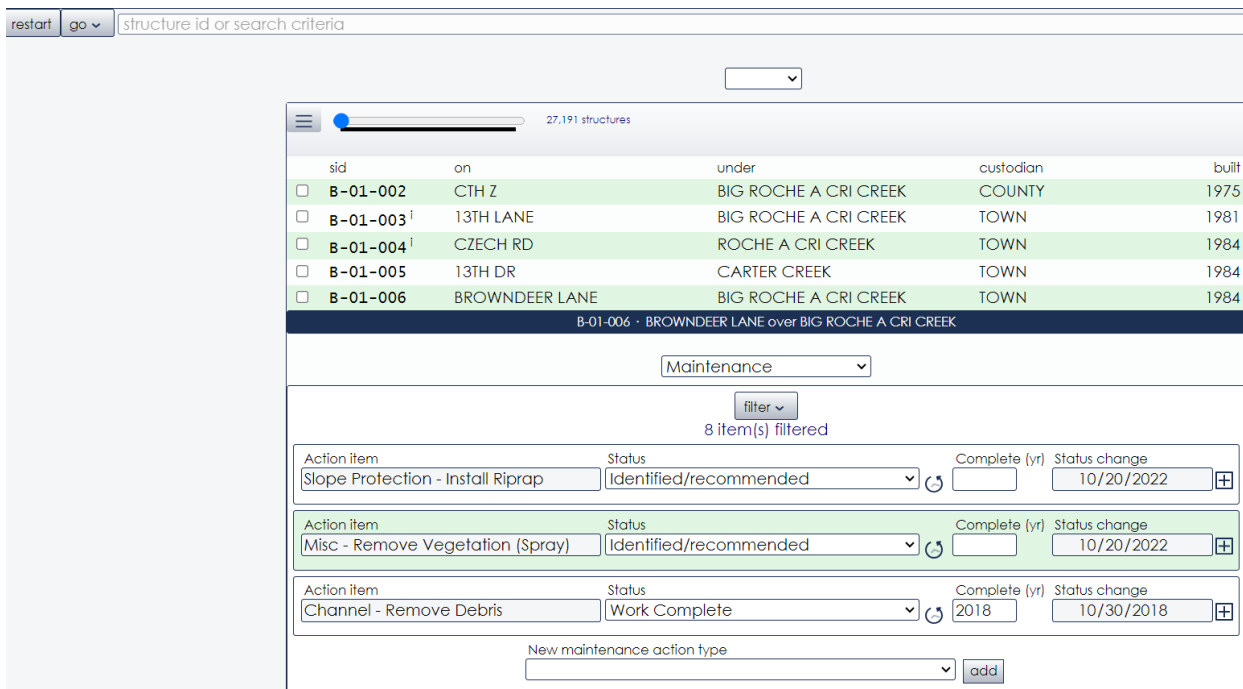
When you hover over the button with three bars, there is now the option for “inline edit”.



“Inline edit” option available for selection

After “inline edit” is selected, the user can see one of the structure windows for a specific structure on the home screen. The user can select which screen to view through the dropdown on the screen.

For example, in the image below the items on the “maintenance” tab are displayed for B-01-006. The user can view or update any items on this tab the same as if they had navigated to B-01-006.

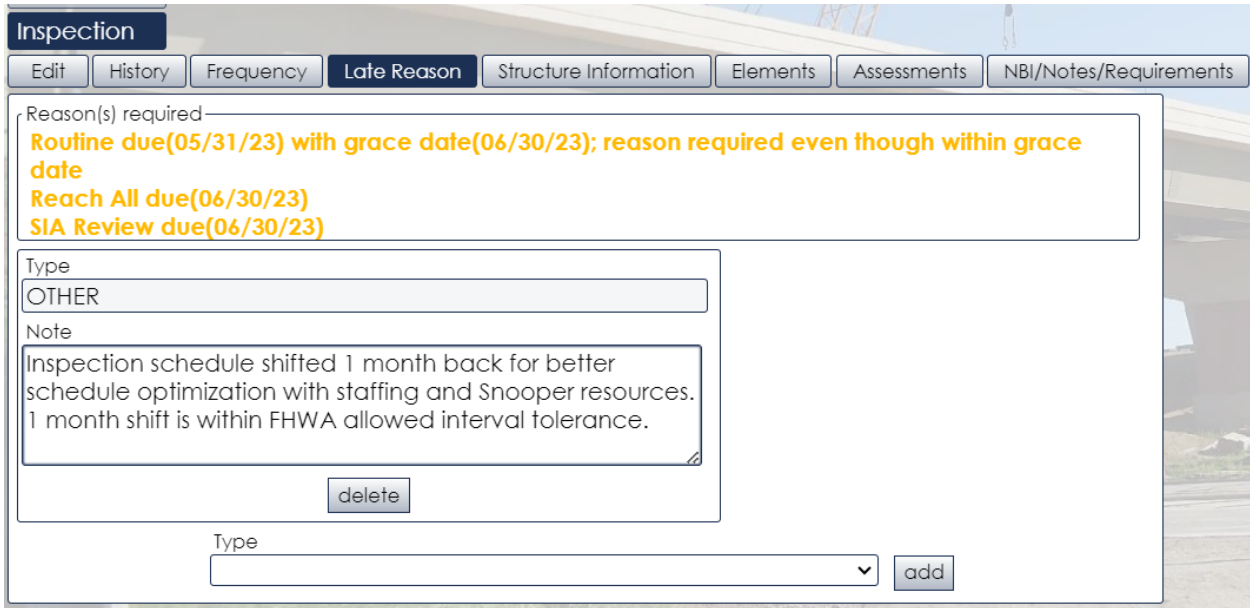


Using inline editing to view maintenance items

Using inline editing allows for quicker viewing and accessing of a specific screen for multiple structures. Users can run an assist for a specific subset of structures, select inline edit, select which screen to view, and then click on each structure ID to view that screen for that structure.

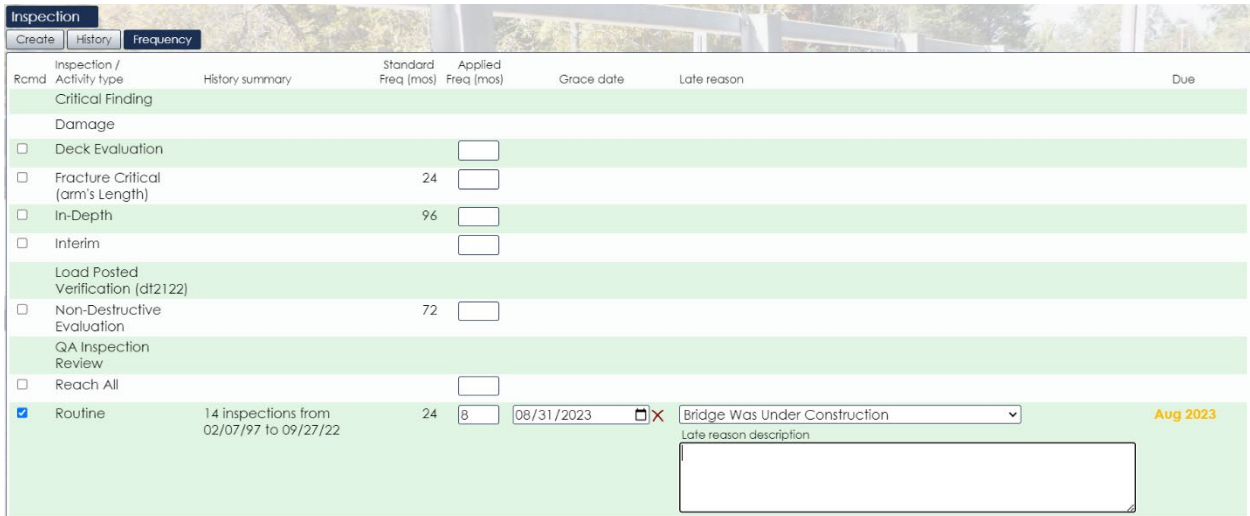
Grace date late reason

A change was made to when late reasons can be entered for bridges with grace dates. The first image below shows the screen in the previous HSIS version for entering late reasons. The late reason could only be entered once the inspection was created.



Previous grace date late reason screen.

In this version, the region program manager can enter the late reason for the grace date on the frequency tab when entering the grace date.



Frequency screen showing late reason dropdown for grace date.

Once the inspection is created, the inspector can edit the late reason.

Inspection

Edit History Frequency **Late Reason** Structure Information Elements Assessments NBI/Notes/Requirements

Reason(s) required—
Routine due(07/31/21) with grace date(08/31/23); reason required even though within grace date

Type
OTHER

Note
test

delete

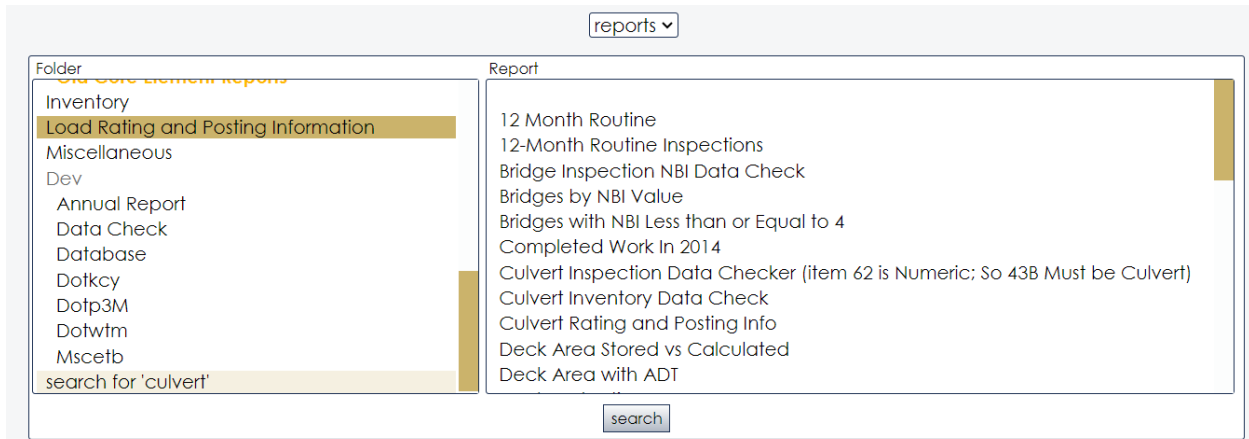
Type
▼ add

Late reason screen in new version prepopulates with frequency tab data.

Bug Fixes

The following bugs were fixed with this version. Additional bugs not listed below were also fixed.

- 1) "N" could not be saved for SNBI ratings.
- 2) A bug where span 1 data would not save when entered on the SNBI tab has been fixed.
- 3) The "search" button in "reports" was case sensitive, limiting results shown. For those unaware of this functionality, there is a "search" button at the bottom of the "reports" screen that you can click and then type a word in to search reports for. This may help narrow your search for a specific report.



"Search" button for reports

- 4) Channel material was not being displayed on pdf. A column for channel material has been added, as shown in the example below.

Substructure Notes

Chk	Unit	Max Water Depth(ft)	Mode	Channel Material	Notes
X	Cardinal	0.0	Wade	Clay	
X	Non Cardinal	0.0	Wade	Sand	

Channel material now included on inspection pdf