

Custom Alternate VUEWorks Editor (CAVE)



Signing & Pavement Marking User Manual

Wisconsin Department of Transportation Asset Management

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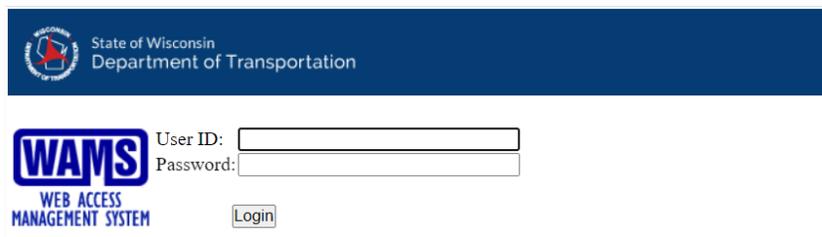
Logging into CAVE:

1. Open Google Chrome and enter the following URL:

- CAVE Production (***Working Environment**): <https://trust.dot.state.wi.us/cave>
 - *It is recommended users bookmark this link for future use.
- CAVE Acceptance (Test Environment): <https://acceptance.dot.state.wi.us/cave>
 - *Used for testing purposes only – all actual data needs to be updated in CAVE Production.

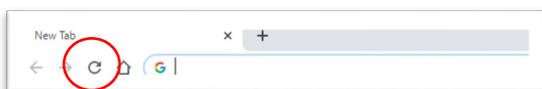
NOTE: CAVE is best formatted to be used with Google Chrome. If you need Google Chrome added to your computer, put in an IT Service ticket to request it. Otherwise, Microsoft Edge is acceptable.

2. Enter your WAMS User ID and Password to Log In:



***For CAVE Production, use the same User ID and Password that you use for the VUEWorks Production environment.**

3. The CAVE Default Map View (Homepage) will display:



***If the map does not display upon log-in, click “Reload this page” in the browser tool bar.**

Note: Upon log in, all layers will be turned OFF by default.

Navigating the CAVE Default Map View (Homepage) Features:



Features:

- 1 - Zoom In & Zoom Out** (Adjusts the display size of the map)
- 2 – Default Home Page** (Returns map display to what is shown above – selected asset layers will remain on)
- 3 – Basemaps** (Adjusts the format of the Default Home Page map, including options to display aerial topography)
- 4 – Legend** (Will display all layers & basemaps the user has turned ON)
- 5 – Box Zoom In & Box Zoom Out** (Alternate zoom option, use to zoom in/out of a particular area on the map)
- 6 – Pan Map** (Turned on by default, allows users to move around the map without selecting displayed assets)
- 7 – Back Extent/Forward Extent** (Adjust to or from recent map zoom ratios)
- 8 – Selection Tools** (Create an asset selection set, add to a selection set, or remove assets from a selection set)
- 9 – Coordinates** (Provides GPS information regarding asset or map locations)
- 10 – Layers** (Turn on/off the Asset and Operational Basemap layers that are displayed on the map)
- 11 – Search** (Query asset layers to build a selection set)
- 12 – Feature Table** (Displays selected assets; options to Edit, Clone, Delete, Retire (signs), or Remove assets)
- 13 – Feature Editor** (Edit existing assets or create new assets)
- 14 – Clear Selection Set** (Removes all currently selected assets from the Feature Table)
- 15 – Measurement** (Allows users to measure distances by various units; after measuring, re-click icon to close)
- 16 – Current User** (User Log Out)

Note: The above function names will display in CAVE by hovering cursor over icons.

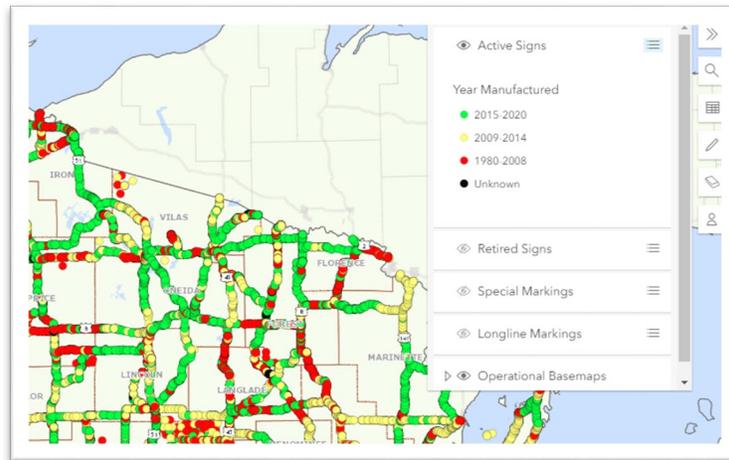
Asset Layers:

Asset Layers are turned **OFF** by default. To turn **ON** a layer, open the Layer icon  in the upper right corner and click on the  next to the respective layer.

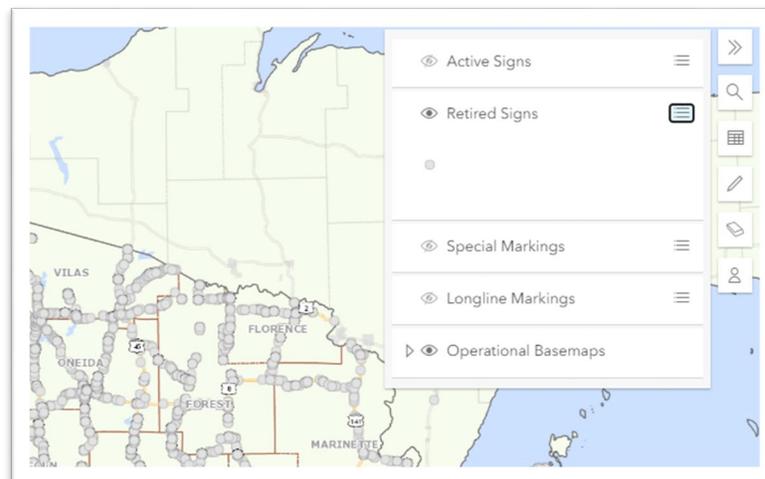


Unselect  to turn the layer **OFF**.

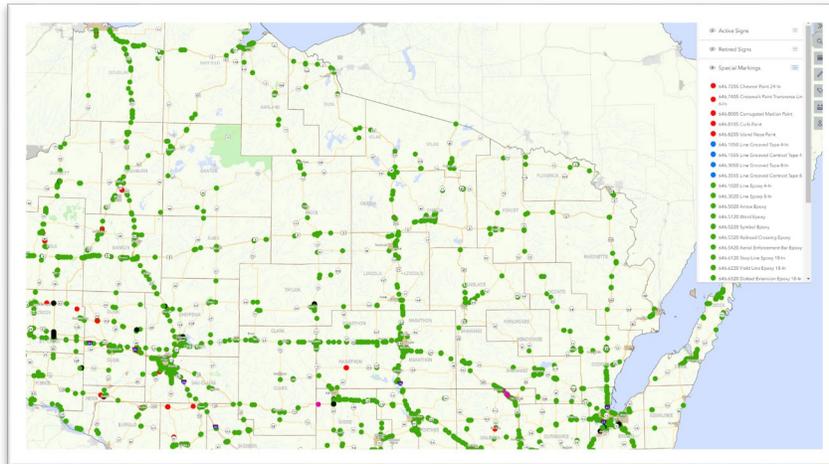
- 1. Active Signs:** When on, the map will display all active sign assets across the state. Assets are color-coded into four categories based on Year Manufactured.



- 2. Retired Signs:** When on, the map will display all retired sign assets across the state (signs no longer in service). All retired signs are color-coded into one category.
 - a. This layer is read-only, Retired assets cannot be edited.**



3. **Special Markings:** When on, the map will display all Special Marking assets across the state. Special Markings are color coded by “Bid Item & Description” (Paint = Red, Epoxy = Green, etc.).



4. **Longline Markings:** When on, the map will display all Longline assets across the state. Longline Markings are color coded by “Bid Item & Description” (Paint = Red, Epoxy = Green, etc.).



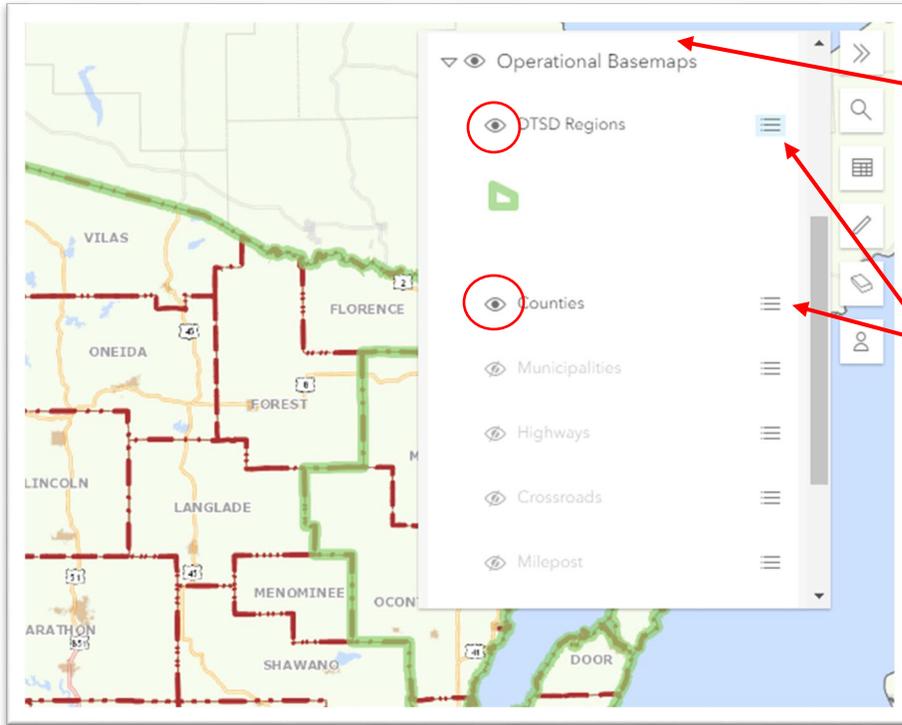
*If a user does not have access to edit assets for a certain layer, when that layer is turned ON the assets will still display but they will be in read-only mode.



If a user does not have access to edit a specific layer, the “Feature Editor” icon  will not be displayed.

Operational Basemaps:

In addition to the Asset Layers, there are several other basemap layers that users can turn on to assist with editing.



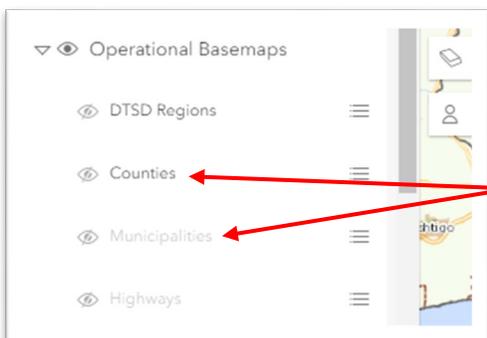
The Operational Basemaps header is turned **ON** by default. This must be on for any of the selected sub-basemaps to display.

In the image to the left, the DTSD Regions and Counties basemaps are turned on.

To display the Legend information, click the icon to the right of each basemap.

Operational Basemap options include the following:

- DTSD Regions
- Counties
- Municipalities
- Highways
- Crossroads
- Milepost
- Connecting Highways
- Improvement Program (LET)
- Bridges – WISLR

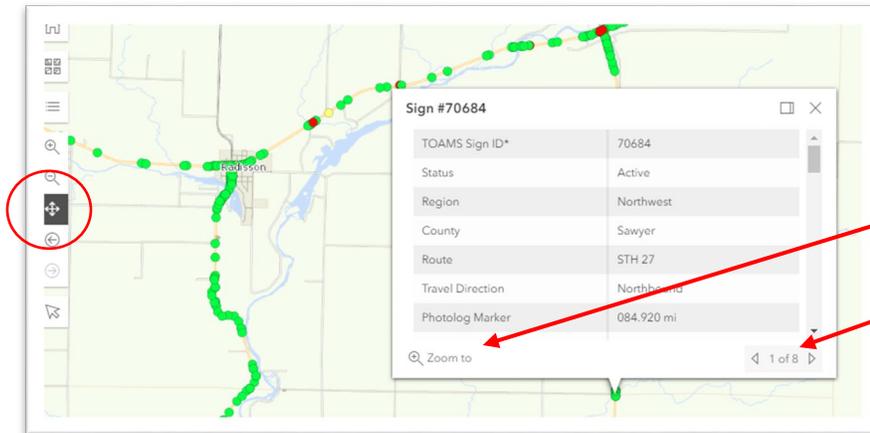


NOTE: Some of the basemaps require being zoomed in to a certain extent before they can be turned **ON** and display. If a basemap option is grayed out, zoom in until it becomes selectable.

In the image to the left, only DTSD Regions and Counties basemaps can be turned **ON** (notice the basemaps below are grayed out). By zooming in, the grayed-out basemaps will become selectable.

Signing:

Viewing an Asset's Attributes:



While on the “Pan Map” setting, click on any asset on the map to display its features.

Offers the ability to zoom in closer to the specific asset(s).

If multiple assets are identified, it will list all of them (i.e., 1 of 8) and the user can scroll through them.

Selecting Multiple Assets:

1. Open “Selection Tool” on the left side



i. Select option:

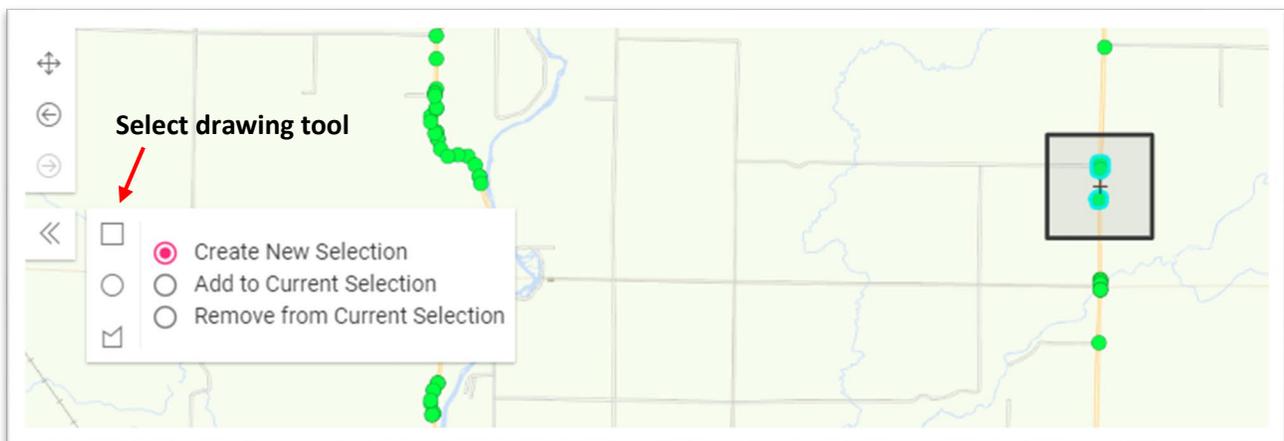
1. **Create New Selection (Default)**
2. **Add to Current Selection** (selected assets will be combined with previously selected assets)
3. **Remove from Current Selection** (highlight previously selected assets to remove them from the selection set)

ii. Select drawing tool:

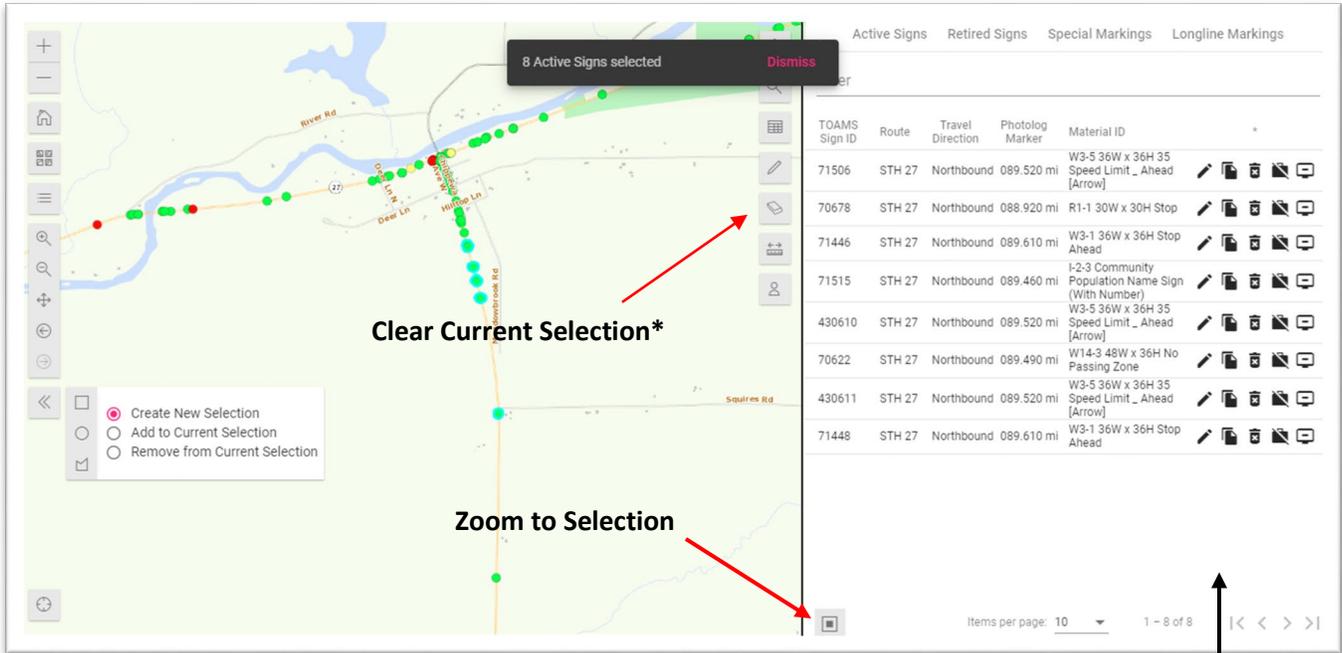
1. **Rectangle Select**
2. **Circle Select**
3. **Polygon Select**

Note: User must click on a drawing tool option prior to selecting assets. If the drawing tool is not selected, the cursor will still be in default “Pan Map” mode.

2. Based on the option & drawing tool selected, highlight desired assets on the map.



3. Once assets are selected, they will be highlighted and will display in the Feature Table.
 - i. A pop-up notification will be displayed (ex. 8 Active Signs selected)
 1. Can click on dismiss, otherwise it will disappear on its own
 2. Pop-up notification will adjust depending on the user's chosen option (Create New Selection, Add to Selection or Remove from Selection)



FEATURE TABLE

*Clear Current Selection: Will remove all selected assets from the Feature Table.

Searching for Assets:

1. On the right side, open "Search"  & select layer ("Active Signs")
2. Fill out the fields as needed & click Search
3. Returned assets will display in the Feature Table

Note 1: Every time "Search" is selected, the assets in the Feature Table are refreshed (CAVE does not have the ability to perform multiple searches to generate a combined selection set).

However, by unchecking "Show selected features only" (which removes all assets from the map except for the search's returned assets), users can then use the "Selection Tool" feature to add additional assets to the search results (use "Add to Current Selection"). Any assets selected using the "Selection Tool" will be added to the search results in the Feature Table.

Note 2: To search by Photolog Marker, the asset's specific Photolog Marker must be known (CAVE search does not offer a range option). Options will be provided in the dropdown if Region, County, & Route fields are filled out.

Feature Table:

All selected assets will populate in the Feature Table. For Active Signs, the Feature Table displays the following:

TOAMS Sign ID (will match the TOAMS Sign ID in VUEWorks), **Route**, **Travel Direction**, **Photolog Marker (PLM)**, **Material ID** and **Year (Manufactured)**. *The Year column is not shown in the image below.

The screenshot shows a software interface with a top navigation bar containing tabs for 'Active Signs', 'Retired Signs', 'Special Markings', and 'Longline Markings'. Below this is a search bar labeled 'Filter'. A table lists assets with columns: TOAMS Sign ID, Route, Travel Direction, Photolog Marker, and Material ID. Each row includes a set of icons for editing, deleting, and other actions. A sidebar on the left contains a grid icon circled in red. At the bottom, there is a pagination control showing 'Items per page: 10' and '1 - 10 of 67', along with navigation arrows.

FILTERING: In the top filter field, enter any keyword or number, regardless of field, and it will only display assets that match.

MANUAL SORTING: Click on the field headings to sort (highest to lowest, A to Z, etc.)

*Can only sort by one field.

ZOOM TO SELECTED: Zoom in closer to the selected assets on the map.

ADJUST ASSETS DISPLAYED: Increase or decrease the number of assets displayed per page.

FIRST, PREVIOUS, NEXT & LAST PAGE

*Click on the  icon to open & close the Feature Table

NOTE: Any manual sort will be retained between subsequent searches.

This close-up shows the table header with columns: TOAMS Sign ID, Route, Travel Direction, Photolog Marker, and Material ID. A small upward-pointing arrow is positioned above the 'Material ID' column heading, indicating it is currently sorted. A red circle highlights this arrow.

*To cancel a manual sort and reset to default prior to conducting a new Search or utilizing the Selection Feature, remove the arrow that is displayed next to the attribute field by clicking on it until it disappears.

Feature Table Icons:



Edit: Select to edit an asset.



Clone: Select to make a duplicate record of an asset.



Delete: Select to delete an asset (*This will remove the asset entirely from the database)



Retire: Select to move an asset to the Retired Signs layer



Remove from Selection: Select to remove an asset from the Feature Table selection set (*This does not delete the asset)

*If a user has read-only access to a layer, the only icon they will see displayed is “Remove from Selection” (the user will not have the ability to Edit, Clone, Delete or Retire assets).

Creating a New Asset:

1. To create a new Active Sign asset, open the “Feature Editor” (pencil icon). You will see options to “Edit features”, which is for existing assets, or “Create features”, which is to add new assets.
2. Under “Create features”, select the correct “Year Manufactured” from the dropdown for the new Active Sign asset.

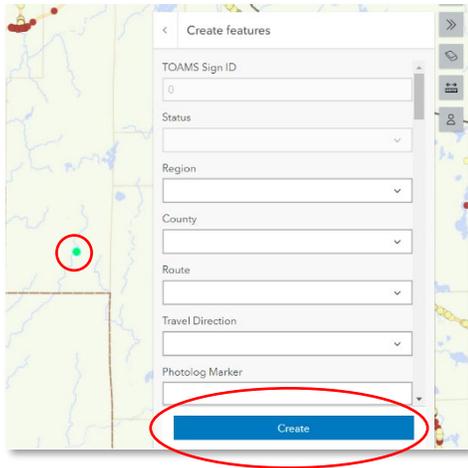
*Year Manufactured options are listed from newest to oldest – scroll to find the asset’s correct year.

The screenshot shows the 'Editor' window with the following sections:

- Edit features:** Contains a 'Select' button.
- Create features:** Contains a 'Filter types' dropdown menu.
- Active Signs:** A list of years from 2024 to 2019, each with a colored dot (blue for 2024, green for others).

A red arrow points to the '2023' option in the 'Active Signs' list.

3. Once the “Year Manufactured” is selected, you will be prompted to click on the map to add the asset. The asset can be relocated as needed after adding it to the map.
4. Once the asset is added to the map, it’s attribute fields will populate to be filled out.
 - i. Once the attribute fields are filled out, click “Create”.



*TOAMS Sign ID will auto-populate once record is created.

*Sign Area (sq ft) will auto-populate the next day based on the sign’s Material ID or Width & Height (if the Material ID does not contain dimensions, Width & Height fields must be populated for Sign Area (sq ft) to generate.

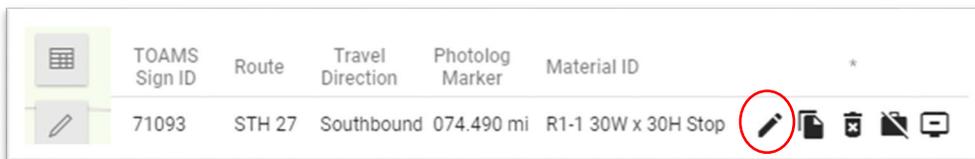
*Lat/Long fields will automatically be populated once Saved based on the asset’s placement on the map.

Note: CAVE is designed for multiple users to create assets simultaneously.

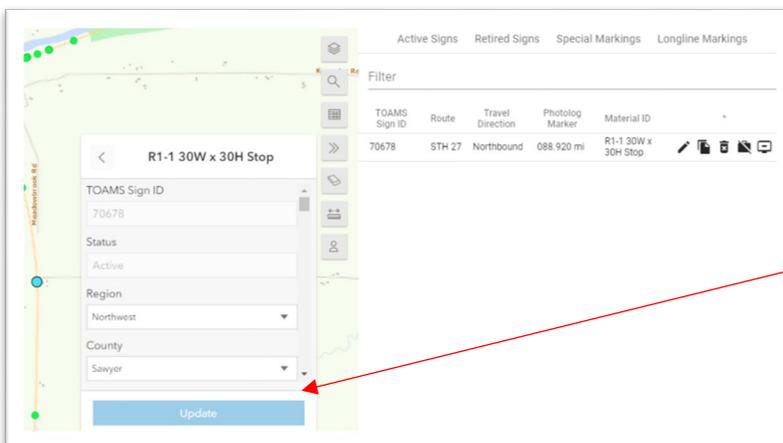
Editing an Asset:

*There are two ways to edit assets:

1. Perform a “Search” or use the “Selection Tool” to develop a selection set.
 - i. Once the assets are displayed in the “Feature Table”, click on “Edit”



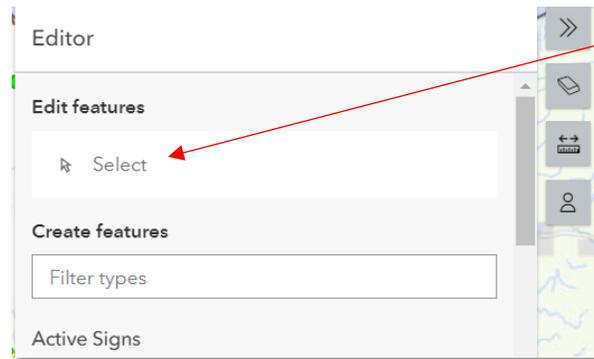
- ii. After selecting “Edit”, the asset will be highlighted on the map with a black circle and its attribute fields will display:



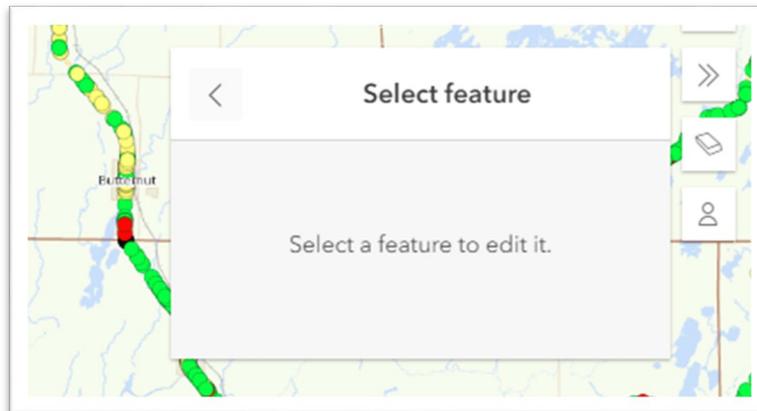
*At this point, the user can EDIT the attribute fields and/or RELOCATE the asset on the map. To relocate the asset, click on the respective dot and drop it in the desired location. Once the edits and/or relocations are complete, click  .

2. Use the Feature Editor to select an asset to edit.

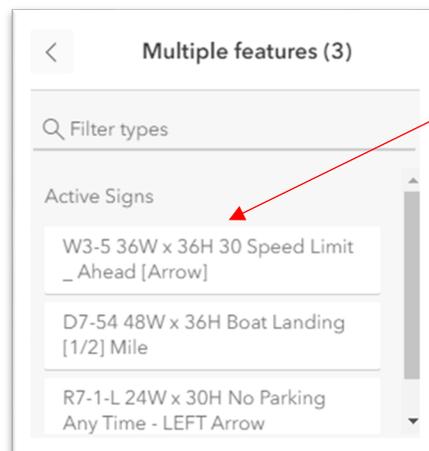
- i. Select “Feature Editor” (pencil icon) and then under “Edit features” click Select.**



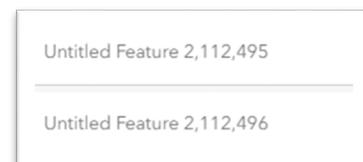
- ii. “Select a feature to edit it” will display in the window.**
1. Click on the asset on the map you want to edit.



- 2. If multiple assets are selected, user will be able to pick which asset to edit.**



***If multiple assets are selected, they will be listed by Material ID. If this field is blank in any of the selected assets, it will display as an “Untitled Feature”.**



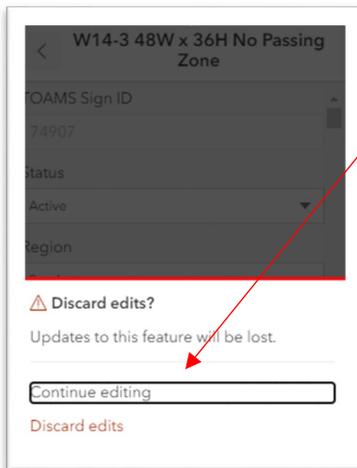
- 3. Once the asset is selected on the map, it will be highlighted on the map and its attribute fields will display for editing and/or relocating.**
a. If relocating, Lat/Long fields will be auto-populated once Updated (saved).

Creating New Assets and Editing Notes:

- To close the “Feature Editor” window, click on the left arrow icon in the header until it returns to default (i.e., the Editor window closes):

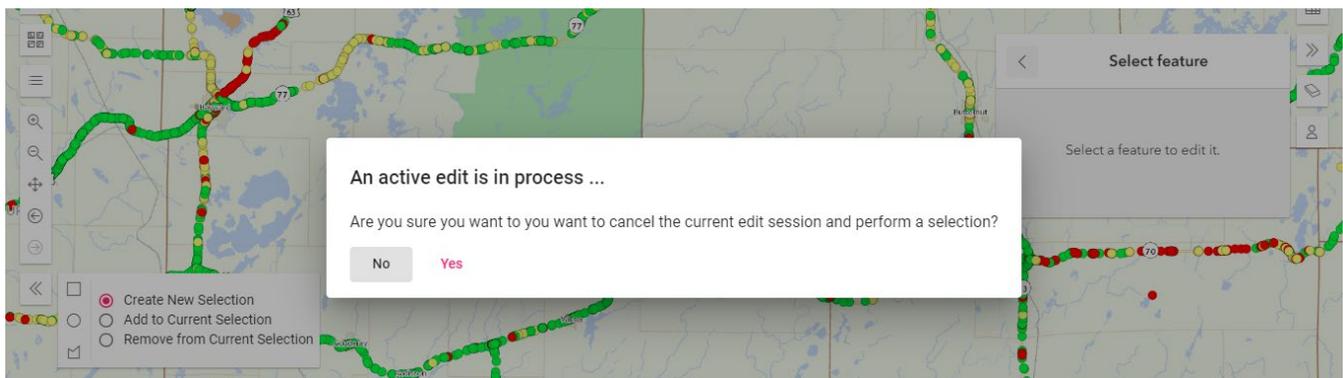


- If you add an asset and try closing the Feature Editor before clicking on “Create” OR you make any edits to an existing asset and try closing the Feature Editor window before clicking on “Update”, you will get a version of the following warning:



Can select either “Continue editing” to go back and “Create” or “Update” OR “Discard edits”, which will close the Feature Editor window without saving the new asset or any edits.

- If you have the Feature Editor open and try to use the “Selection Tool” to select assets, the below warning will display. Select “no” to go back and complete the edit. Select “yes” to cancel the edit and proceed with the asset selection. Any edits done without clicking on “Create” or “Update” will be lost.



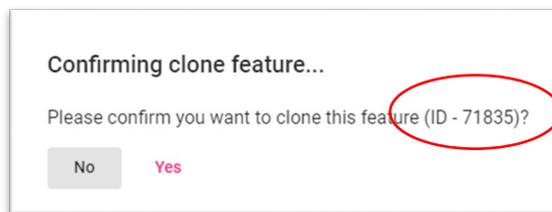
Cloning an Asset:

In CAVE, users can create exact duplicates of existing assets:

1. Use the “Selection Tool” or “Search” to add assets to the Feature Table.
 - i. In the Feature Table, identify the asset you want to duplicate and click “Clone”.

TOAMS Sign ID	Route	Travel Direction	Photolog Marker	Material ID	
71835	STH 77	Eastbound	066.600 mi	W14-3 48W x 36H No Passing Zone	

2. A notification window will populate to confirm the clone.
 - i. It will list the TOAMS Sign ID of the original asset that is being cloned (ex. TOAMS ID – 71835).



- ii. Select “Yes” and the cloned asset will: 1.) be added to the map stacked on top of the original asset (relocate as needed); and 2.) be added to the Feature Table.
 - a. Click on the cloned asset in the Feature Table to edit and relocate as needed.

Cloning Notes & Tips:

- Unless the user has the Feature Table manually sorted by TOAMS Sign ID, the cloned asset will always populate directly beneath the original asset (and the TOAMS Sign ID will display as 0). If the Feature Table was manually sorted by TOAMS Sign ID, the cloned asset will either display at the top or bottom of the selection set depending on direction of the sort (TOAMS Sign ID will still display as 0).
- The cloned asset will initially display in the Feature Table with a TOAMS Sign ID = 0; however, it will be assigned a unique TOAMS Sign ID next time it is selected. The cloned asset’s TOAMS Sign ID will be the next available number, so it will always be higher than the original.
- The only field that will not be cloned is the Comments field. The user will need to add/edit comments to the cloned asset as needed.
- By default, a note will be added to the cloned asset’s Comments field:

Retired Date	
Comments	Copy of TOAMS Sign ID -71835
Image Name	\\dotphotologp\08ph

Comment can be edited/deleted as needed.

Deleting an Asset:

1. To delete an Active Sign asset, use the “Selection Tool” or perform a “Search” to add the asset to the Feature Table. Once in the Feature Table, click on “Delete”.

TOAMS Sign ID	Route	Travel Direction	Photolog Marker	Material ID	*
72473	STH 77	Eastbound	066.960 mi	R1-1 30W x 30H Stop	

2. Once “Delete” is selected, a pop-up warning will display to confirm. Select “Yes” to delete or “No” to go back. NOTE: Deleting an asset removes any record of it existing.

Confirming delete feature...

Please confirm you want to delete this feature (ID - 72473)?

NOTE: Only Delete assets if there was an error (i.e., an asset was created by mistake). If the sign did exist in the field, it should be retired (see below) to retain record of it if no longer installed.

Retiring an Asset:

1. To retire an Active Sign asset, use the “Selection Tool” or perform a “Search” to add the asset to the Feature Table. Once in the Feature Table, click on “Retire”.

TOAMS Sign ID	Route	Travel Direction	Photolog Marker	Material ID	*
72473	STH 77	Eastbound	066.960 mi	R1-1 30W x 30H Stop	

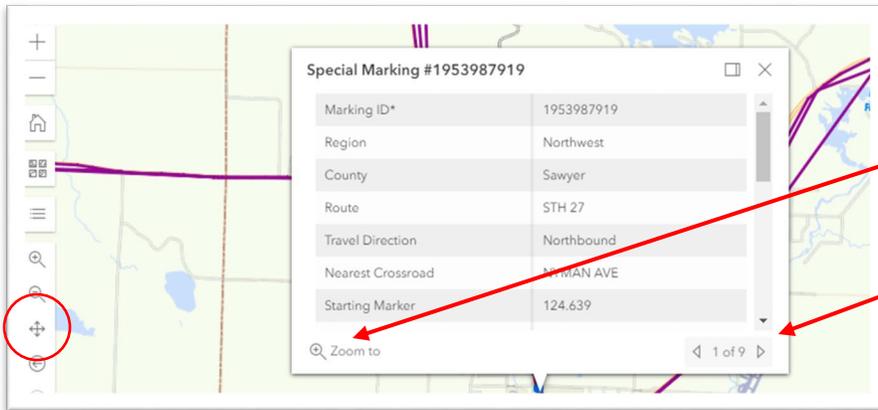
2. Once “Retire” is selected, a pop-up warning will display to confirm. Select “Yes” to retire or “No” to go back. NOTE: Retiring an asset does not remove record of it existing, it just moves it from the “Active Signs” layer to the “Retired Signs” layer.

Confirming retire feature...

Please confirm you want to retire this feature (ID - 72473)?

Pavement Marking (Special & Longline Markings):

Viewing an Asset's Attributes:



While on the “Pan Map” setting, click on any asset on the map to display its features.

Offers the ability to zoom in closer to the specific asset(s).

If multiple assets are identified, it will list all of them (i.e., 1 of 9) and the user can scroll through them.

Selecting Multiple Assets:

1. Open “Selection Tool” on the left side



i. Select option:

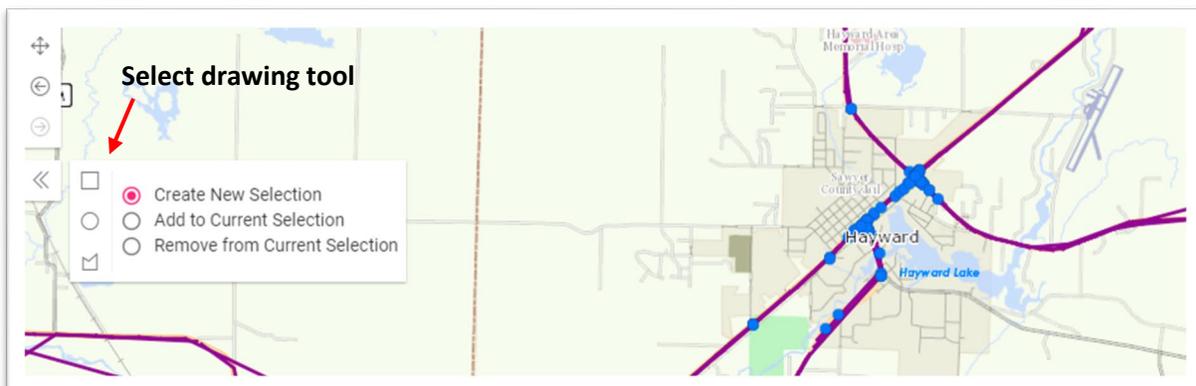
1. **Create New Selection (Default)**
2. **Add to Current Selection** (selected assets will be combined with previously selected assets)
3. **Remove from Current Selection** (highlight previously selected assets to remove them from the selection set)

ii. Select drawing tool:

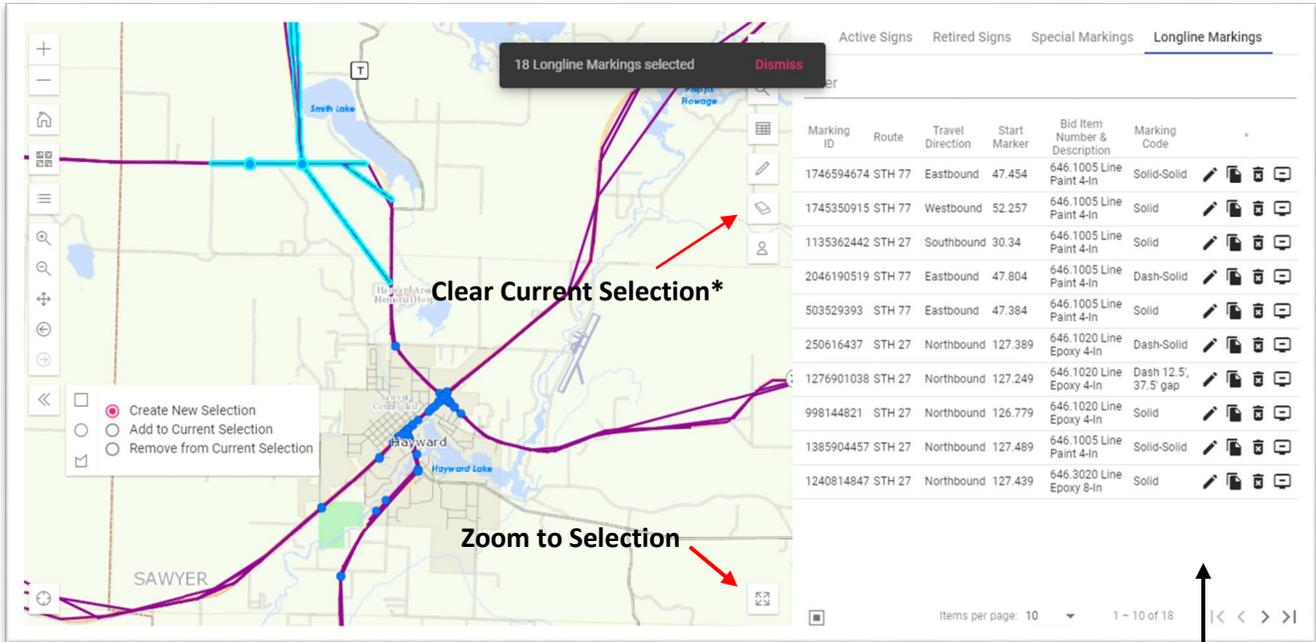
1. **Rectangle Select**
2. **Circle Select**
3. **Polygon Select**

Note: User must click on a drawing tool option prior to selecting assets. If the drawing tool is not selected, the cursor will still be in default “Pan Map” mode.

2. Based on the option & drawing tool selected, highlight desired assets on the map.



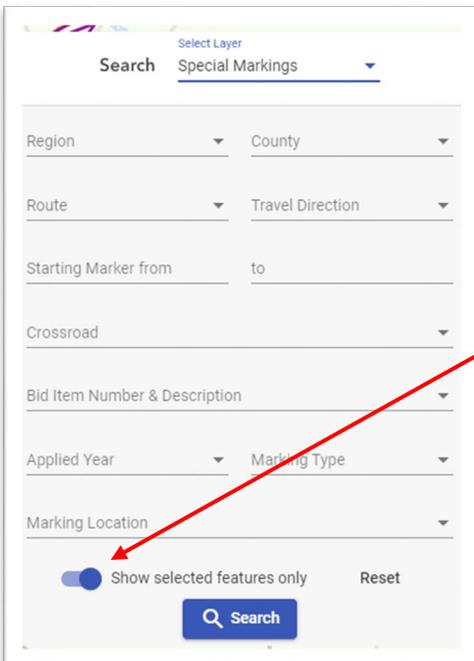
3. Once assets are selected, they will display in the Feature Table.
 - i. A pop-up notification window will be displayed (ex. 18 Longline Marking selected)
 1. Can click on dismiss, otherwise it will disappear on its own
 2. Pop-up notification will adjust depending on the user's chosen option (Create New Selection, Add to Selection or Remove from Selection)



FEATURE TABLE

*Clear Current Selection: Will remove all selected assets from the Feature Table

Searching for Assets:



1. On the right side, open "Search"  & select layer (Special Markings or Longline Markings)
2. Fill out the fields as needed & click search
3. Returned assets will display in the Feature Table

Note 1: Every time "Search" is selected, the assets in the Feature Table are refreshed (CAVE does not have the ability to perform multiple searches to generate a combined selection set).

However, by unchecking "Show selected features only" (which removes all assets from the map except for the search's returned assets), users can then use the "Selection Tool" feature to add additional assets to the search results. Any assets selected using the "Selection Tool" will be added to the search results in the Feature Table

Note 2: Can search using a range for Starting Marker (Special Markings) and Start & End Markers (Longline Markings)

Note 3: Search fields are similar between Special Marking & Longline layers.

Feature Table:

All selected assets will populate in the Feature Table. For Special Markings & Longline Markings, the Feature Table displays the following:

Marking ID (will match the Marking IDs in VUEWorks), Route, Travel Direction, Start Marker, End Marker (Longline only), Bid Item & Description and Marking Location (Longline only) or Marking Code (Special Markings only).

Active Signs Retired Signs Special Markings Longline Markings						
Filter						
Marking ID	Route	Travel Direction	Start Marker	Bid Item Number & Description	Marking Code	
1829510735	STH 77	Westbound	53.227	646.1005 Line Paint 4-In	Solid	   
1746594674	STH 77	Eastbound	47.454	646.1005 Line Paint 4-In	Solid-Solid	   
1745350915	STH 77	Westbound	52.257	646.1005 Line Paint 4-In	Solid	   
1135362442	STH 27	Southbound	30.34	646.1005 Line Paint 4-In	Solid	   
1458506762	STH 77	Eastbound	46.314	646.1005 Line Paint 4-In	Solid	   
2046190519	STH 77	Eastbound	47.804	646.1005 Line Paint 4-In	Dash-Solid	   
503529393	STH 77	Eastbound	47.384	646.1005 Line Paint 4-In	Solid	   
250616437	STH 27	Northbound	127.389	646.1020 Line Epoxy 4-In	Dash-Solid	   
1276901038	STH 27	Northbound	127.249	646.1020 Line Epoxy 4-In	Dash 12.5', 37.5' gap	   
998144821	STH 27	Northbound	126.779	646.1020 Line Epoxy 4-In	Solid	   

Items per page: 10 1 - 10 of 28 << < > >>

FILTERING: In the top filter field, enter any keyword or number, regardless of field, and it will only display assets that match.

SORTING: Click on one of the field headings to sort (highest to lowest, A to Z, etc.)

*Can only sort by one field.

ZOOM TO SELECTED: Zoom in closer to the selected assets on the map.

ADJUST ASSETS DISPLAYED: Increase or decrease the number of assets displayed per page.

FIRST, PREVIOUS, NEXT & LAST PAGE

*Click on the  icon to open & close the Feature Table

NOTE: Any manual sort will be retained between subsequent searches.

Active Signs Retired Signs Special Markings Longline Markings						
Filter						
Marking ID	Route	Travel Direction	Start Marker	Bid Item Number & Description	Marking Code	
				↑		

*To cancel a manual sort and reset to default prior to conducting a new Search or utilizing the Selection Feature, remove the arrow that is displayed next to the attribute field by clicking on it until it disappears.

Feature Table Icons:



Edit: Select to edit an asset.



Clone: Select to make a duplicate record of an asset.



Delete: Select to delete an asset (*This will remove the asset entirely from the database)

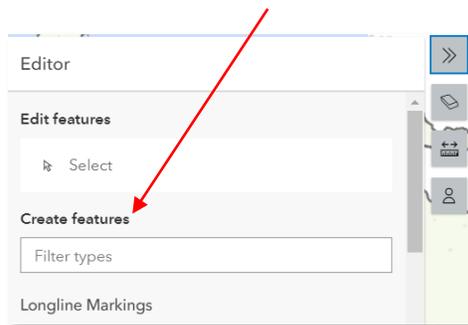


Remove from Selection: Select to remove an asset from the Feature Table selection set (*This does not delete the asset)

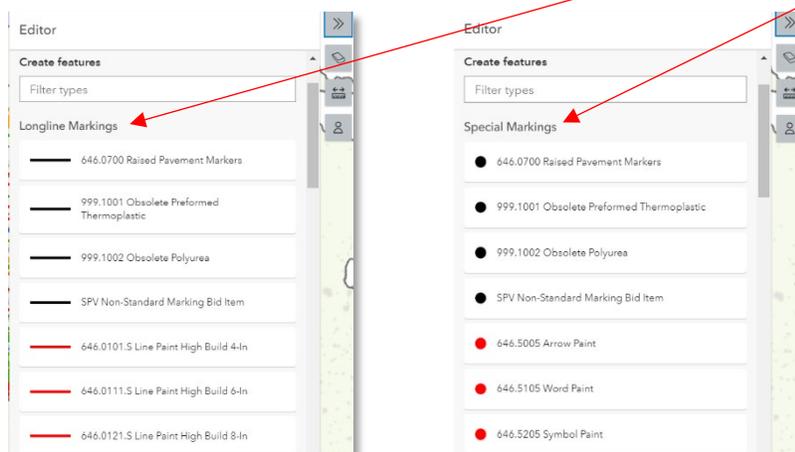
*If a user has read-only access to a layer, the only icon they will see displayed is “Remove from Selection” (the user will not have the ability to Edit, Clone, or Delete assets).

Creating a New Asset:

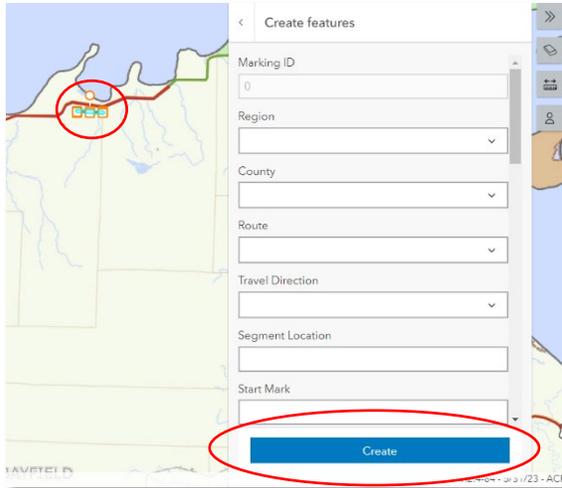
1. To create a new Longline or Special Marking asset, open the “Feature Editor” (pencil icon). You will see options to “Edit features”, which is for existing assets, or “Create features”, which is to add new assets.



2. Under “Create features” select the correct “Bid Item & Description” (Longline or Special Marking) for the new asset.



3. Once the correct “Bid Item & Description” is selected, you will be prompted to click on the map to add the asset. The asset can be relocated as needed after adding it to the map.
4. Once the asset is added to the map, it’s attribute fields will populate to be filled out.
 - i. Once the attribute fields are filled out, click “Create”.



*Marking ID will auto-populate once record is created for both Longline & Special Markings.

*When adding a Longline asset, since it is a linear record the user will need to click (at least) twice to indicate Start & End Markers.

*For Longline assets, the Segment Length field will auto-populate the following day based on the Start & End Markers. (Any data manually entered in this field will be overwritten by the nightly update). The Verified Footage field needs to be manually entered.

*Lat/Long fields will automatically be populated once the record is added.

Note: CAVE is designed for multiple users to create assets simultaneously.

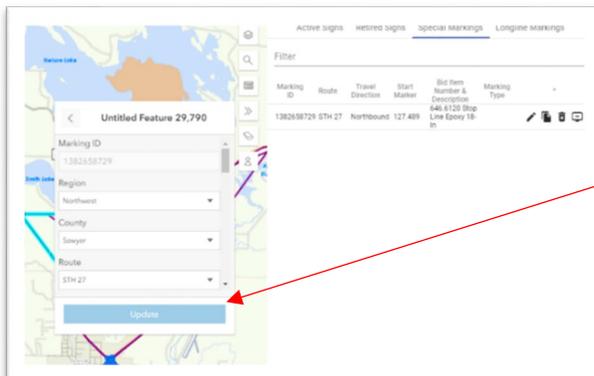
Editing an Asset:

*There are two ways to edit assets:

1. Perform a “Search” or use the “Selection Tool” to develop a selection set.
 - i. Once the assets are displayed in the “Feature Table”, click on “Edit”

Marking ID	Route	Travel Direction	Start Marker	Bid Item Number & Description	Marking Type
1382658729	STH 27	Northbound	127.489	646.6120 Stop Line Epoxy 18-In	

- ii. After selecting “Edit”, the asset will be highlighted on the map and its attribute fields will display:

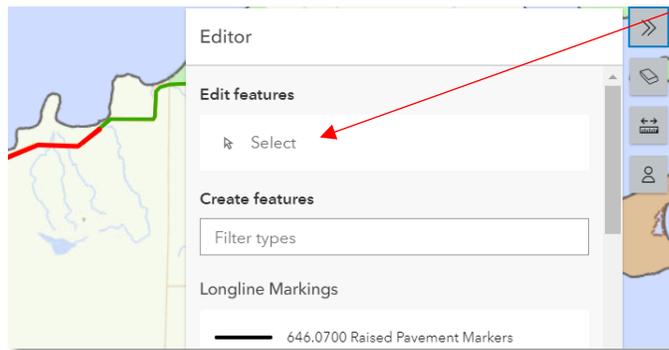


*At this point, the user can EDIT the attribute fields and/or RELOCATE the asset on the map. To relocate the asset, click on the respective dot and drop it in the desired location. Once the edits and/or relocations are complete, click

Update

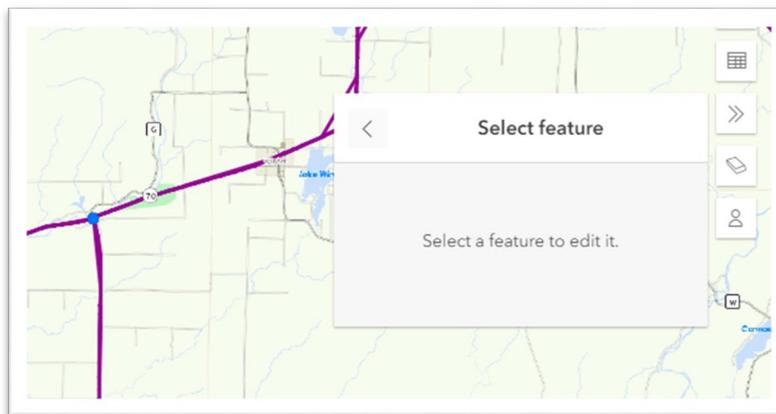
2. Use the Feature Editor to select an asset to edit.

i. Select “Feature Editor” (pencil icon) and then under “Edit features” click Select.

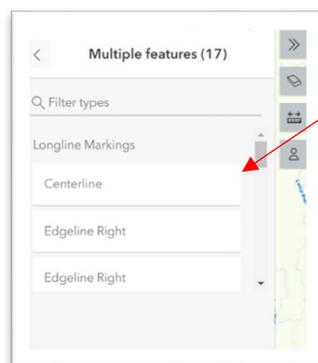


ii. “Select a feature to edit it” will display in the window.

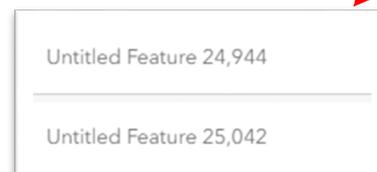
1. Click on the asset you want to edit.



2. If multiple assets are selected, user will be able to pick which asset to edit.



If multiple assets are identified, they will be listed by Marking Location (Longline Markings) or Bid Item & Description (Special Markings). If the corresponding field is blank in any of the selected assets, it will display as an “Untitled Feature”.



3. Once the asset is selected on the map, it will be highlighted on the map and its attribute fields will display for editing and/or relocating.

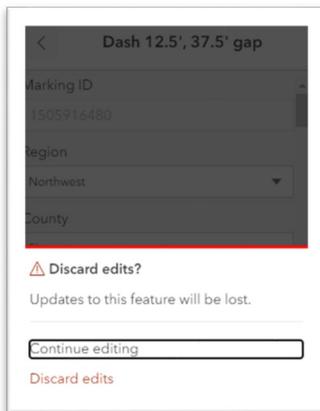
a. If relocating, Lat/Long fields will be auto-populated once Updated (saved).

Creating New Assets and Editing Notes:

- To close the “Feature Editor” window, click on the left arrow icon in the header until it returns to default (i.e., the Editor window closes):

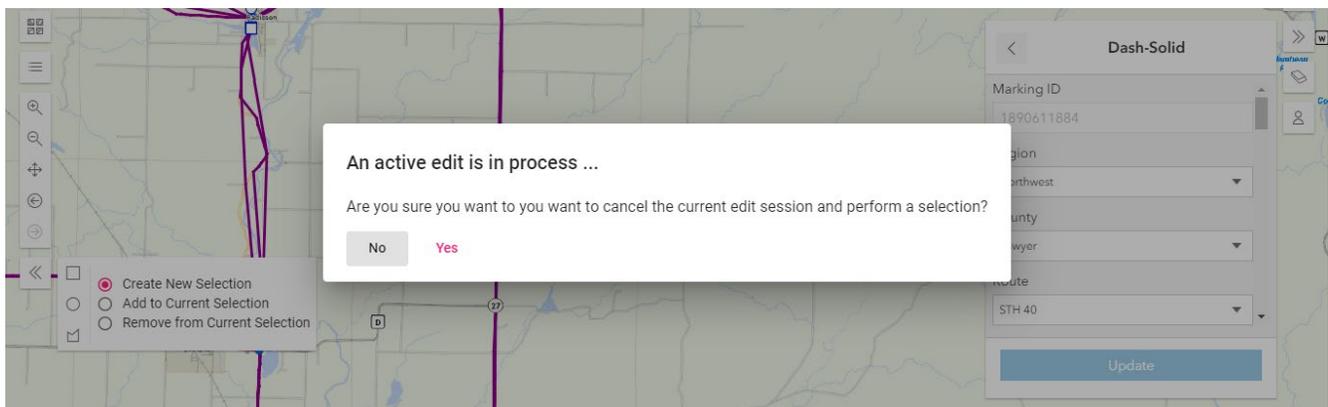


- If you add an asset and try closing the Feature Editor before clicking on “Create” OR you make any edits to an existing asset and try closing the Feature Editor window before clicking on “Update”, you will get a version of the following warning:



Can select either “Continue editing” to go back and “Create” or “Update” OR “Discard edits”, which will close the Feature Editor window without saving the new asset or any edits.

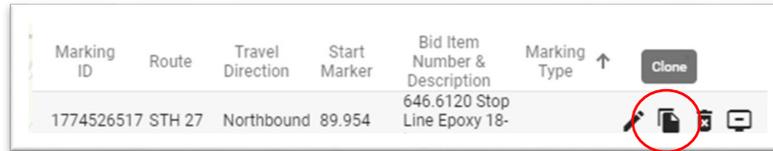
- If you have the Feature Editor open and try to use the “Selection Tool” to select assets, the below warning will display. Select “no” to go back and complete the edit. Select “yes” to cancel the edit and proceed with the selection. Any edits done without clicking on “Create” or “Update” will be lost.



Cloning an Asset:

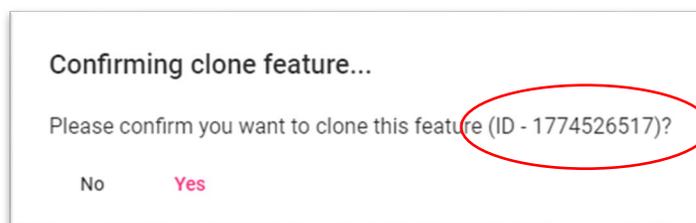
With CAVE, users can create exact duplicates of existing assets:

1. Use the “Selection Tool” or “Search” to add assets to the Feature Table.
 - i. In the Feature Table, identify the asset you want to duplicate and click “Clone”



Marking ID	Route	Travel Direction	Start Marker	Bid Item Number & Description	Marking Type ↑	Clone
1774526517	STH 27	Northbound	89.954	646.6120 Stop Line Epoxy 18-		

2. A notification window will populate to confirm the clone
 - i. It will list the Marking ID of the original asset that is being cloned (ex. ID – 1774526517)



Confirming clone feature...

Please confirm you want to clone this feature (ID - 1774526517)?

No Yes

- ii. Select “Yes” and the cloned asset will: 1.) be added to the map stacked on top of the original asset (relocate as needed); and 2.) be added to the Feature Table.
 - a. Click on the cloned asset in the Feature Table to edit and relocate as needed.

Cloning Notes & Tips:

- Unless the user has the Feature Table manually sorted by Marking ID, the cloned asset will always populate directly beneath the original asset (and the Marking ID will display as 0). If the Feature Table was manually sorted by Marking ID, the cloned asset will either display at the top or bottom of the selection set depending on direction of the sort (Marking ID will still display as 0).
- The cloned asset will initially display in the Feature Table with a Marking ID = 0; however, it will be assigned a unique Marking ID next time it is selected. The cloned asset’s Marking ID will be the next available number, so it will always be higher than the original.
- The only field that will not be cloned is the Comments field. The user will need to add/edit comments to the cloned asset as needed.
- By default, a note will be added to the cloned asset’s Comments field:



Project ID	8150-20-60
Maintaining Authority	Wisconsin DOT
Comments	Copy of Marking ID -1209618569

Comment can be edited/deleted when editing cloned asset.

Deleting an Asset:

1. To delete a marking asset, use the “Selection Tool” or perform a “Search” to add the asset to the Feature Table. Once in the Feature Table, click on “Delete”

Marking ID	Route	Travel Direction	Start Marker	Bid Item Number & Description	Marking Code		Delete
933561229	STH 27	Northbound	84.924	646.1020 Line Epoxy 4-In	Solid	  	

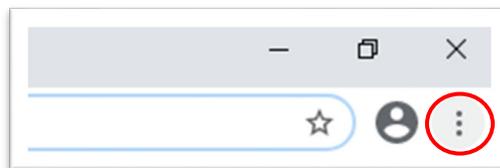
2. Once “Delete” is selected, a warning pop-up will display to confirm. Select “Yes” to delete or “No” to go back. **NOTE: Deleting an asset removes any record of it existing.**

Confirming delete feature...

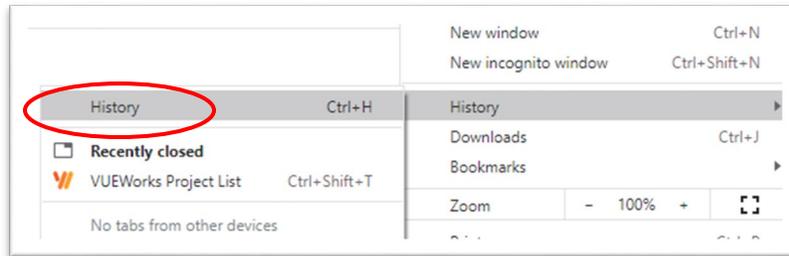
Please confirm you want to delete this feature (ID - 933561229)?

Signing & Marking General Functionality Notes:

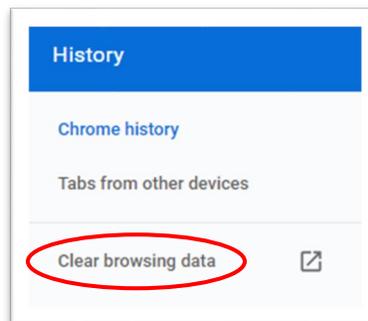
- CAVE does not retain a user's status upon log out, therefore any searches and/or selection sets will be lost and will need to be rebuilt upon each log in.
 - CAVE will time-out after approx. 20 minutes of inactivity, requiring the user to re-log in. Any searches and/or selection sets will need to be rebuilt.
 - TOAMS Sign IDs in CAVE match the asset's respective TOAMS Sign ID in VUEWorks. Marking IDs in CAVE (Special Markings & Longline Markings) match the asset's respective Marking ID in VUEWorks.
 - This will be true for existing assets and for newly created assets.
 - Any updates (new assets, edits, asset relocations on the map, etc.) in CAVE will simultaneously be updated in VUEWorks (and vice versa).
 - CAVE does not have the ability to multi-edit. If you have a group of assets that can be multi-edited, VUEWorks can still be utilized to do so.
 - In CAVE, multiple users can create new assets simultaneously.
 - All reporting will still be done in VUEWorks. The link for VUEWorks PRODUCTION is:
<https://toams.wi.gov/vueworks>
 - Auto-populated fields:
 - Active Signs Layer: The "Sign Area (sq ft)" field will auto-populate the following day based on the information manually entered in Material ID and Width & Height fields.
 - i. Users are unable to manually enter information in the "Sign Area (sq ft)" field.
 - Longline Layer: The "Segment Length" field will auto populate (in miles) the following day based on the information manually entered in the Start & End Marker fields.
 - i. Any data manually entered in the "Segment Length" field will be overwritten if not correct (End Marker minus Start Marker)
 - ii. With this nightly script, it is important the Start & End Markers entered for each record are accurate to ensure correct "Segment Length" calculations.
- *The "Painted Footage" field was renamed "Verified Footage" and the auto population script was removed in 2022 – THIS FIELD MUST BE MANUALLY ENTERED.**
- It is recommended users clear cache in Google Chrome prior to use and every 30-45 minutes – it will help with overall performance.
 - To clear cache in Google Chrome:
 - i. Click on the "three vertical dots" icon in the upper right-hand corner:



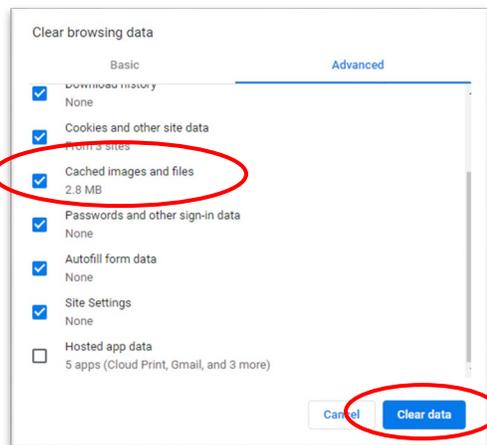
ii. In the drop-down, navigate to “History → History”:



iii. On the left side of the screen, click on “Clear browsing data”:



iv. Make sure “Cached images and files” is selected at a minimum, and select “Clear data”:



v. Close Google Chrome and re-open before logging into CAVE.

1. Once you clear cache, you will need to turn on your desired layer and re-build your selection set.

- Any performance issues can be sent to DOTDLTSDBTOTOAMSSupport@dot.wi.gov for troubleshooting.