

Roadsoft® Roundup



For Roadsoft help, visit
the Roadsoft Manual at
<http://roadsoft.org/help>

Roadsoft 2020.X - Module & Feature Updates

Sidona DeBrule
Center for Technology & Training

The Center for Technology and Training (CTT) incorporates client feedback and input whenever possible during Roadsoft update development. This client feedback is used to address program bugs, add additional functionality or features, changes the way existing things work in the program, etc. The last few 2020.x updates to Roadsoft are no exception. The Drainage Structure Module was introduced in Roadsoft in version 2018.5, and now that clients have been using the module, they had some things that they wanted added and tweaked. Taking their feedback into consideration, CTT staff have added some additional features to the module, and addressed a few items users asked about. In addition, Roadsoft has had a Small Segment Tool meant to simplify the process of finding and eliminating small road segments since version 7.0, which was released in March of 2010. It was time for the tool to get a minor face lift, so CTT staff changed the interface slightly, modified the functionality a touch, and updated the programming to the current Roadsoft architecture.

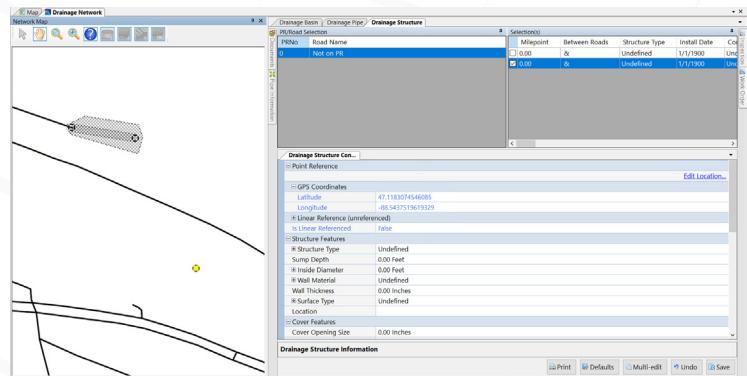
Drainage Structure Module - Additions, Improvements, and Name Change

Over the past few versions of Roadsoft, there have been several improvements made to the Drainage Structure Module. The changes include reworking the layout of the module in order to include individual tabs for drainage structures, basins, and pipes within the larger drainage structure network module. There have also been new functions added to the mini map section within the module for adding and managing assets.

The Drainage Structure Module has been expanded to include other drainage network assets such as drainage basins and the pipes connecting the drainage network together to better help users manage their networks. With these changes will come a new

name - the Drainage Network Module. Now, opening the module from any drainage asset layer, such as the Drainage Structure, Drainage Pipe, or Drainage Basin Layers, will open the Drainage Network Module. This module includes tabs for managing asset information on structures, pipes, and basins, placing drainage assets on the map, and recording information about inspections for the different types of assets. Another notable thing about this addition is that the drainage basin is the first polygonal layer in Roadsoft to have a manageable module attached to it, as opposed to polygonal layers for areas such as counties and hydrography that have limited information associated with them. Drainage basins can also be drawn onto the map using three or more points, which is also a new feature in Roadsoft.

Another recent update to the module is the addition of several asset management buttons. There are new tools in the mini map section of the various drainage network tabs. These buttons allow users to add drainage structures, pipes, and basins to Roadsoft without having to switch back to the main map, saving users time and making it easier to pick out existing parts of the drainage network



The updated Drainage Network Module has new tabs and asset management tools for multiple types of assets including drainage basins and pipes connecting various drainage networks.

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The screenshot shows the 'Small Segment Tool' window. At the top, there's a search bar labeled 'Find Road Name' and a message '94 segments (filtered)'. Below is a table with columns: Length (Left), Length, Length (Right), PRNNo, Road Name, From, To, and City/Twp. The table lists various road segments with their details. At the bottom of the tool, there are buttons for 'Delete and Merge into Left' and 'Delete and Merge into Right', along with a dropdown for 'Maximum Short Segment Length' set to 150 Feet.

The updated Small Segment Tool allows users to quickly identify all road segments under 150 ft in their database, and then makes it easy to merge them with larger adjacent segments.

without having to sort through other assets on the main map.

These new features better equip Roadsoft as a tool to assist agencies in managing their drainage networks and provides users with a central place they can use for collecting information about their road and utility systems.

Small Segment Tool

This is a reminder that a large-scale framework update for Roadsoft and the Laptop Data Collector (LDC) has recently been released. This update added new features, enhancements and bug fixes, and most notably provided a migration from the Michigan geographic framework (MGF) base map to the ESRI-based Roads and Highways format. This brings Roadsoft's base map up to date with the modern statewide architecture. More information about this technology upgrade can be found in *Roadsoft Roundup Volume 18, Issue 1*, and *Volume 20, Issue 1*.

During framework migrations, the process sometimes creates small segments of between 5 and 150 ft due to small changes or corrections in the position of roads and intersections. This is especially likely during this recent migration, as it deals with 3 years of data and a transfer to a completely new base map framework. These small segments can cause trouble with data

collection and project submission. It's easy to miss a short road segment while driving and collecting data. Project submissions can be delayed or even rejected due to these small, unrated road segments. However, there is a way to manage and merge these short road segments in Roadsoft, the Small Segment Tool.

The Small Segment Tool is a feature in Roadsoft that allows users to quickly identify all road segments under 150 ft in their database, and then makes it easy to merge them with larger adjacent segments. The tool also shows users information about all the involved road segments, making it easier to decide which adjacent section to merge it with.

Roadsoft Tech Assist Tuesdays

Given the current situation due to COVID-19, the Center for Technology & Training is not able to provide face-to-face technical assistance like we have in the past with our Roadsoft on the Road tech assist visits. In an effort to provide personalized technical assistance to agencies in need, we are offering online sessions for agencies through Zoom and Adobe Connect.

Available Tuesdays from June 9th - August 25th, with one hour slots at 9, 10, and 11 am. Visit roadsoft.org/roadsoft-tech-assist-tuesdays to request a session. Roadsoft staff will contact you to make arrangements.

Now Introducing...
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The same personalized technical assistance, delivered online

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Questions? Email roadsoft@mtu.edu

We can help you:

- Get started using Roadsoft
- Import, export, & update data
- Get assistance with LDC or the Mobile App
- Get started with Roadsoft advanced features
- Assist other Roadsoft topics or tasks



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Spotlight

Roadsoft Staff Spotlight

Sidona DeBrule
Center for Technology & Training



User Interface & Experience Specialist Lindsey Wells

While in the last issue of the *Roadsoft Roundup* we shone the spotlight on one of our more well-established programmers, Mary Crane, in this issue we would like to take the time to introduce two of the newest additions to the Center for Technology & Training and the Roadsoft programming team. We would like to introduce Lindsey Wells and Jacob Coulson. Wells is a user interface and experience specialist who works to make sure Roadsoft is easy to understand and navigate, while Coulson is a former intern that was recently hired full-time as an IT support specialist and a software developer focused on software testing and bug fixes.

Lindsey Wells joined the CTT in 2019 after graduating from Michigan Technological University (Michigan Tech) with a Bachelor of Science in Scientific and Technological Communication (STC) and a minor in writing. Originally from southeast Michigan, she started going to Michigan Tech for computer engineering before transferring into the STC program. Wells became interested in the User Interface & User Experience Specialist position at the CTT after being recommended by a friend who had previously interned with us. Not only was Wells interested due to her desire to stay in the scenic Upper Peninsula of Michigan, but also because user experience and standardization are topics she cares about. As she put it, “I figure we can use technology to help solve some of the problems that it causes instead of just hitting the rewind button. And so I feel like using user interface design, user experience design, usability, that all helps to fill in the same hole.”

As a user specialist, Wells uses her skills in writing and design to help improve Roadsoft from a “usefulness” perspective. Wells described her work as “I go through the programs themselves and look at potential problems or known problems in the interface - how people interact with the program – and try to fix it as best I can. Or, I’ll make recommendations to the software team on how I think something could be clearer.”

Wells works with both the user interface and user experience of Roadsoft, which are related but separate concepts. User interface design involves visual design and focuses on how the user interface, or the menus and controls that users access, look. Then user experience design is how people utilize those user interfaces, also known as UIs. Wells explained “How does it look, how does it work, how do people use it, and in between is how effective is it? So I live in the ‘is it effective?’ world and bounce between the other two.”

To that end, much of Wells’ work involves software testing, though in a different capacity than a software programmer would. Wells’ testing involves going into the program and trying it out to see “can I find everything that they say is in here without having to check to see if it’s in the manual or call tech support to have them tell me where it is?” Sometimes this also extends outside Roadsoft to other parts of the user experience as well, such as the Roadsoft help manual. With experience in technical writing and a fresh set of eyes to look at the manual, Wells sometimes goes through to ensure the documents are written as clearly as possible for people who may also be new to certain Roadsoft features.

Another major part of Well’s usability work is standardization, which focuses on keeping functions consistent between Roadsoft’s various modules. Or as Wells put it, “When the user switches from the Road module to the Culvert module, they still have an idea of how everything works because the delete button is still in the same spot or all the different tabs on the sides are more or less in the same place.” The various modules of Roadsoft have been added over time and coded by numerous different people, so making an active effort to ensure that all those features are updated and maintained so they work consistently and are easy for users to locate and navigate is an important task.

Outside of working at the CTT, Wells enjoys juggling, belly dancing, listening to music, and hiking. She has also begun to learn Norwegian during the quarantine. One thing Wells enjoys during her hikes is learning about foraging, especially about the local mushrooms and plants, along the trails in the local area.

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Spotlight



**Software
Developer & IT
Support Specialist
Jacob Coulson**

Jacob Coulson became a full-time staff member with the CTT in January 2020 after interning with us since November 2018. Originally from Ann Arbor, Michigan, Coulson interned with the CTT as an information technology (IT) intern while going to Michigan Tech and was hired full-time after graduation. Coulson has several years of experience in IT work and brings his interest in programming with him. Before coming to work at the CTT, Coulson worked for the central IT department at Michigan Tech. Coulson said he was interested in changing departments due to his desire to move away from his more administrative role with central IT because he wanted to “get back to helping people with their problems at their desks and get away from trying to answer things over emails.” And with his IT work at the CTT he does just that. “When I first started at the CTT, that was exactly what I was doing, I was going to people’s desks,” he said, “I was figuring out what was wrong with their computers and fixing it. It was a grand old time.” However, while Coulson was originally hired to serve as an IT intern, over time he has transitioned from not only working IT, but also doing work in a software development capacity as well, doing work like software testing and programming.

As both a software developer and an IT support specialist, there’s a lot that Coulson does. He summed up his usual tasks as “I fix computers, I help networking issues, and I do a little programming on the side.” Projects Coulson has worked on include a variety of tasks from setting up computers and other necessary equipment and programs to testing software and updating intern documentation. Lately Coulson’s focus has been on documentation and software testing and will likely include more Roadsoft testing in the future.

Coulson described his average day as “I sit down at my desk and I look at any tickets that are in for testing, or Salesforce, or troubleshooting for Bridge Load Rating. If I have nothing to do there I’ll poke around software trying to break it, either Roadsoft or MERL.” When not doing IT work around the office or performing software testing, Coulson also assists in writing code for bug fixes and other scripts for MERL and Roadsoft. While the two parts of Coulson’s job involve separate types of tasks, he said that they do have some

things in common. “They share critical thinking,” he said, and both involve being able to think logically and troubleshoot problems.

One part of his work that Coulson considers particularly engaging is growing his knowledge of programming on the job. While he learns some information from the other experienced programmers in the office, much of it is also self-taught while working on, experimenting with, and looking over various projects, programs and scripts. Coulson added, “It’s nice because you learn a lot. You learn more than you need to know, and then you learn what you need to know.” And all that knowledge is then useful going forward.

Outside of the CTT Coulson has several hobbies. For one thing, like many programmers Coulson says he has “always loved playing video games”. He also enjoys kayaking and named the Sturgeon River as somewhere he particularly enjoys kayaking in the Upper Peninsula. Additionally, Coulson enjoys making things, including building mechanical keyboards and doing 3D printing. Coulson has been 3D printing for about 3 years and said he enjoys it because it involves both troubleshooting and working with his hands – two things Coulson enjoys doing both inside and out of the office.

Roadsoft Training Moving Forward

Normally in this section of the Roadsoft Roundup, we would be announcing upcoming Roadsoft and Roadsoft-related training being offered by the Center for Technology & Training. However, given the current situation surrounding COVID-19, and the uncertainty of when in-person or face-to-face training will be allowed, we will be looking at providing more web-based and webinar-based training for the foreseeable future.

Upcoming CTT Training events can be found at <http://ctt.nonprofitsoapbox.com/upcoming-events>.

Agencies that have specific technical support questions or issues, or those that would like personalized training, can send a request to roadsoft@mtu.edu.

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Tips & Tricks

Roadsoft Tips & Tricks

In [Roadsoft Roundup 20.1](#), we introduced Roadsoft Tips & Tricks. Here are a few more tips that will hopefully help make your Roadsoft life a bit easier.

Tip #3: Getting Help with Errors

The best thing to do when Roadsoft encounters an error (rare) is to gather as much useful information as possible and pass it along to the CTT with a request for help at roadsoft@mtu.edu. The more information CTT staff has about the error, the better the chances of being able to diagnose and fix it. Some errors are one-off, or specific to one computer or user, while other errors may affect numerous users, so having this information available is very useful to the programmers.

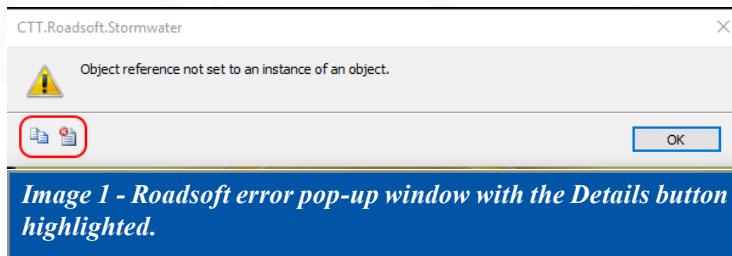


Image 1 - Roadsoft error pop-up window with the Details button highlighted.

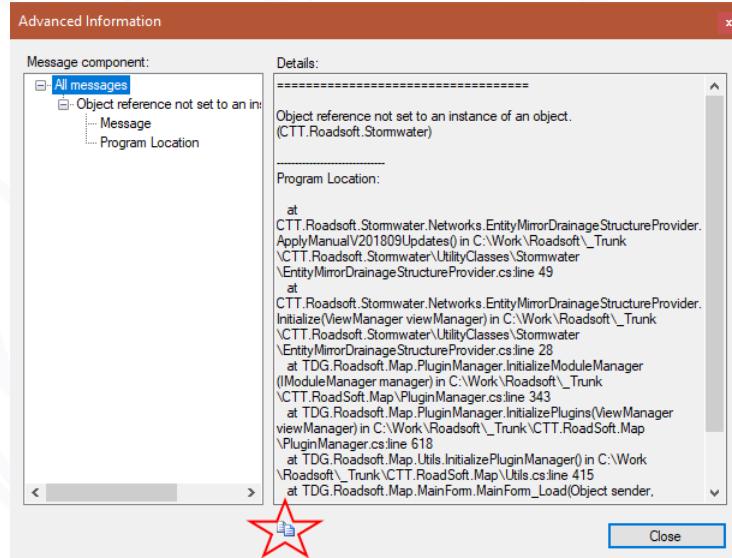


Image 2 - Roadsoft Advanced Information pop-up window with the Copy-to-Clipboard button highlighted.

To gather as much information about the error as possible, start by clicking the Details button in the lower-left corner of the error pop-up window (Details button highlighted in Image 1).

Clicking this button will open the Advanced Information pop-up window that provides details about what went wrong and any error messages produced. At the bottom of the Advanced Information pop-up window, select the Copy to Clipboard button (highlighted at the bottom of Image 2) to copy all error details, paste that information into an email, and send it to roadsoft@mtu.edu for assistance.

Tip #4: Spatial Selection Info Tool

When planning work or maintenance for assets it is important to also know what other objects are nearby since they may affect how work can be carried out in that area. The Spatial Selection Info tool is useful for getting information about all the assets located near objects that you select, letting you look at information about nearby assets from multiple layer modules at the same time. These assets are not “selected” so you would still have to go to their layers to edit them if needed, but it is useful for getting an idea of what is going on around an asset. The Spatial Selection Info tool is located in the Map tab toolbar (highlighted in image 3).

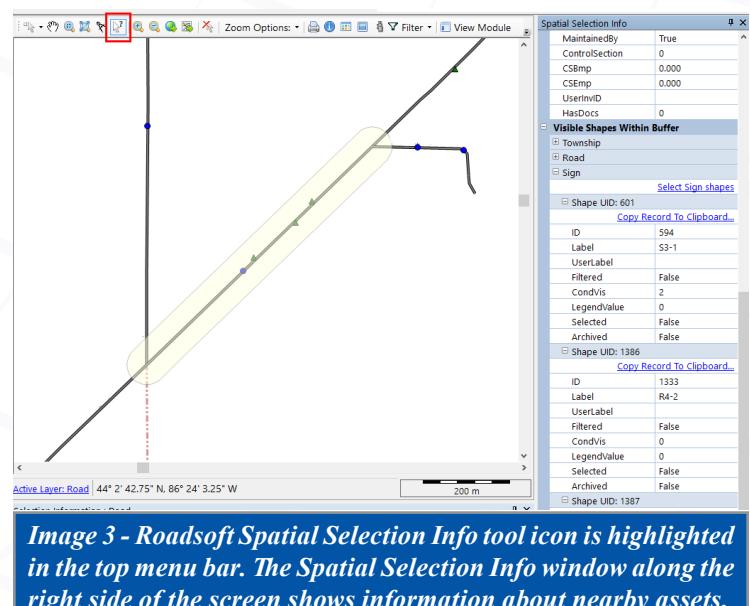


Image 3 - Roadsoft Spatial Selection Info tool icon is highlighted in the top menu bar. The Spatial Selection Info window along the right side of the screen shows information about nearby assets.