Resource Calendar User Guide (v25.3)

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About Resource Calendar

Appian Resource Calendar (ARC) is a cloud-based tool purpose-built and designed to digitize whiteboards, spreadsheets, and calendars used for routing. It is intended for one user per branch per session.

Some of the unique characteristics of Resource Calendar include the ability to plan and view routes in a calendar-style layout by asset or driver. View and plan routes days, weeks, or even months in advance. The user can either plan through simple drag and drop or via lassoing orders on the map. Leverage a robust reservation system that allows you to create placeholders for future deliveries, particularly when specialized equipment or a specific delivery day is required. Use the Point of Interest tool to mark delivery locations that may not yet be displayed on commercial mapping.

Some of the key benefits of the application include automating manual routing methods that speed up the time it takes to plan routes, provide organizational-wide visibility on the current and future delivery schedules so employees across various departments have a fast and easy way to view delivery information and finally, the ability to leverage robust optimization to minimize transportation costs, ensuring the correct driver and equipment are assigned to delivery while adhering to delivery time window commitments made to the customer.

After orders are imported into Resource Calendar from the back office order management system or ERP system, routers will have visibility to all of their committed work as well as orders that will need to be scheduled. Resource Calendar provides planners with many ways to plan and schedule unrouted orders such as via the map view or by leveraging drag and drop capability on the calendar view by placing orders on the correct resources (drivers or assets) at the correct delivery times. The goal is to ensure customer service levels are kept high, resources are properly utilized and drivers remain happy.

Post-planning, finalized routes can be sent back to the order management system or Warehouse management system. Customers also have the option to leverage Dispatch capability for driver assignment and route execution with live planned vs. actual tracking.

Resource Calendar works best in Google Chrome. Other browsers such as Mozilla Firefox or Microsoft Edge may work but are unsupported.

Setting Up Resource Calendar

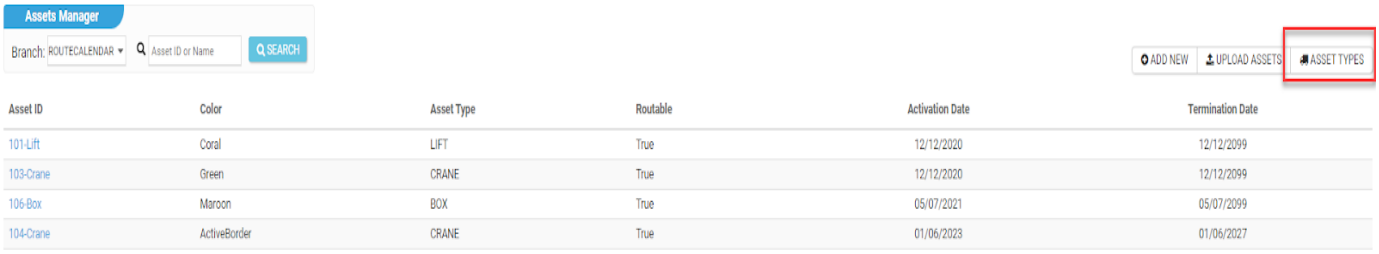
DRTrack Required Information for Resource Calendar

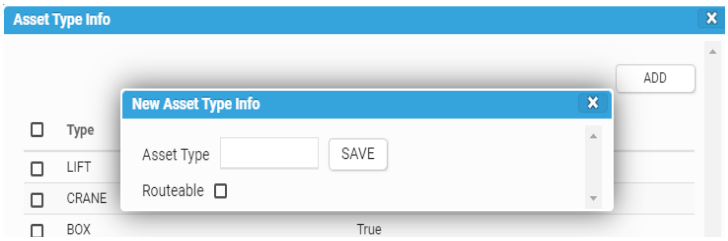
Following a March 2025 update, **Assets** and **Branches** can be managed directly in Resource Calendar. The instructions below are for users who continue to manage this information, as well as **Devices** and **Drivers**, in DRTrack.

Assets

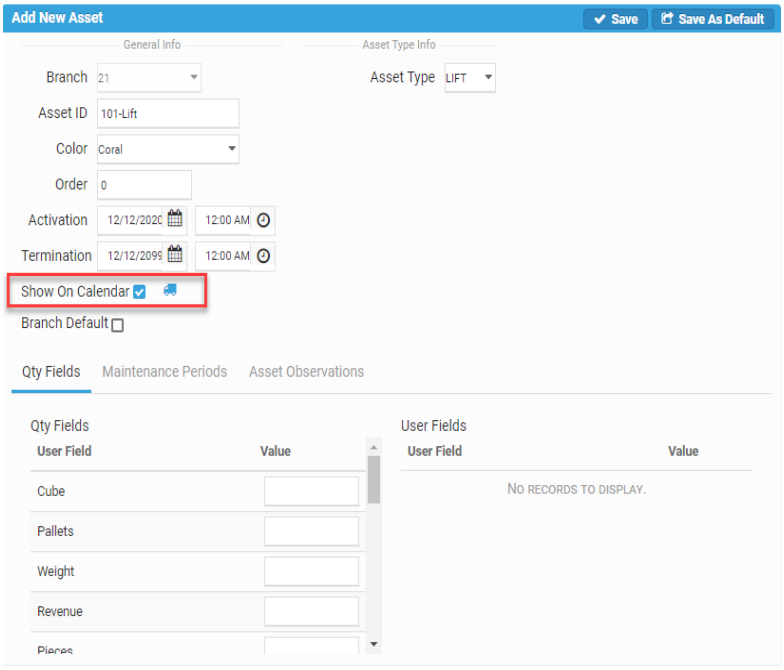
Assets are displayed on the calendar in the Vehicles tab. If no assets are created, then the calendar will be blank. To create an asset, return to DRTrack, then **Admin > Routing > Assets**.

You need to create Asset Types to assign to each asset. An asset type usually represents vehicle types that an organization has in its fleet. Click **Asset Type**, then **Add**. Type in the name of the asset type (group), check **Routeable**, then click **Save**.





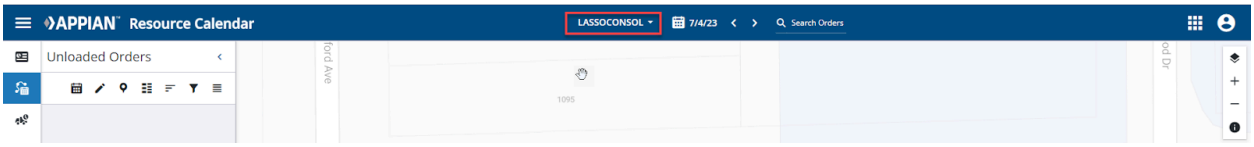
Once the asset type is created, then click Add New and fill out the information. In Resource Calendar, the color is irrelevant, but the Activation and Termination Date are important. If a user is viewing the calendar on a date that is not between the Activation and Termination Date, then the asset will not appear on the calendar. *Show on Calendar* must also be selected for the asset to appear in Resource Calendar.



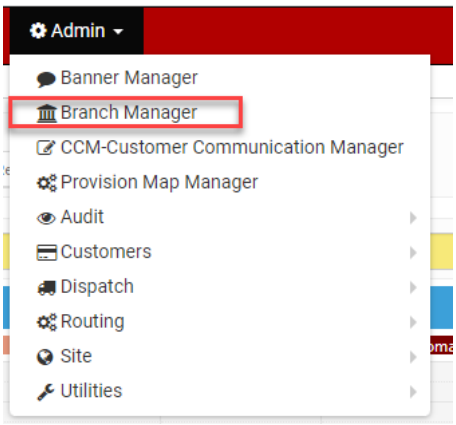
For an asset to be tied to a truck record, the AssetID that you create for an asset MUST be added to the related truck record in the truck profile in a truck user field called AssetID. This also ensures that the asset and driver get tied together during planning.

Branches

Orders, Routes, Drivers, Truck Profiles, Trucks, and Assets are stored in the database tied to a branch. A branch usually represents a physical distribution location. An organization can use one branch or multiple branches, but without them, the drop-down at the header of Resource Calendar will not be available.



To create a branch, navigate to DRTrack using the Bento Menu, then click **Admin > Branch Manager**:



Click **Add New**, fill in the information, then click **Save**.

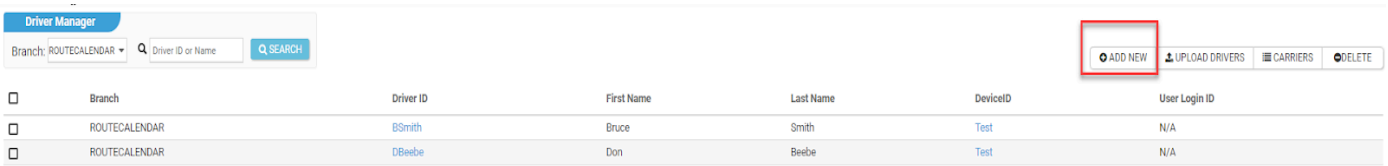
Devices

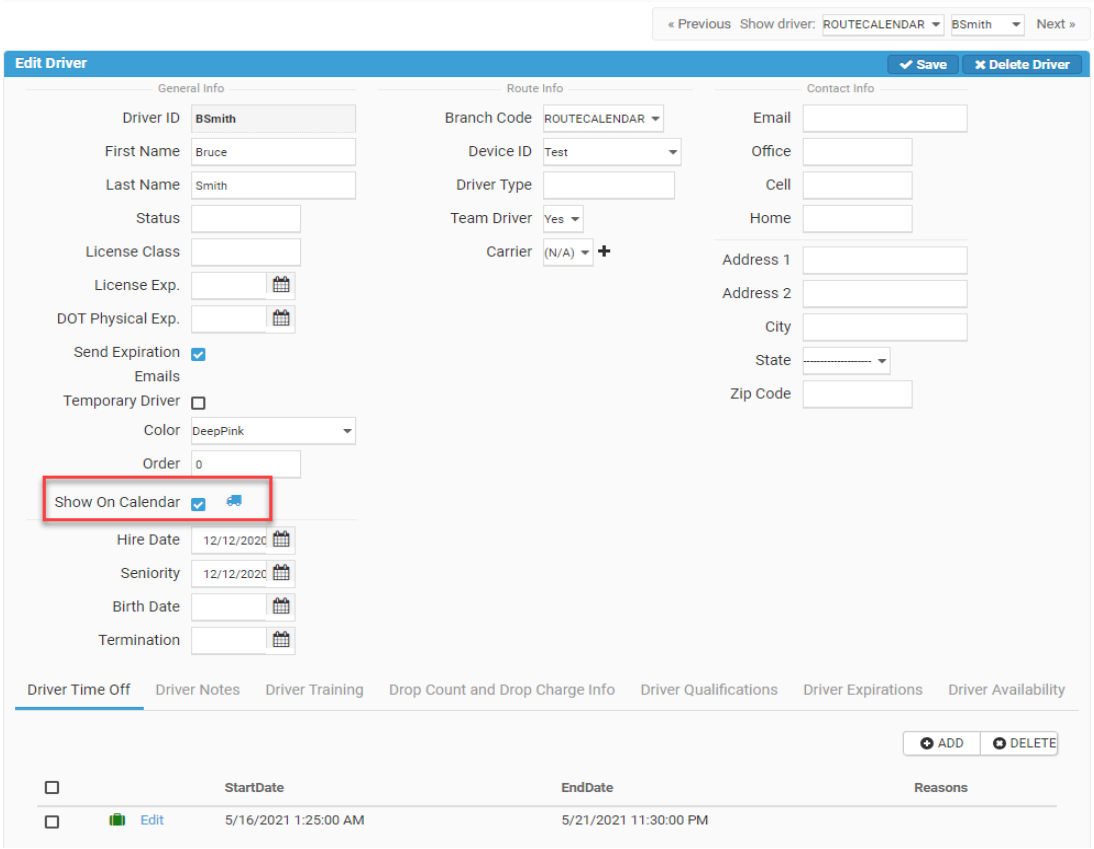
Devices are generally created using the Telematics/Mobile integration that the organization is using. Each driver will require a device that you have previously set up in DRTrack.

Drivers

Drivers must be created in DRTrack or they will not appear on Resource Calendar for planning.

To create drivers, navigate to DRTrack, then click Admin > Dispatch > Drivers. Select the correct branch and click Add New. Complete the information including the *Show on Calendar* checkbox. Remember the DriverID - this needs to be entered into the truck record as a value for the DriverID truck user field. This creates the linkage between the vehicle and driver when planning on the calendar.





Navigating to DRTrack

There are several different ways to view data elements in DRTrack:

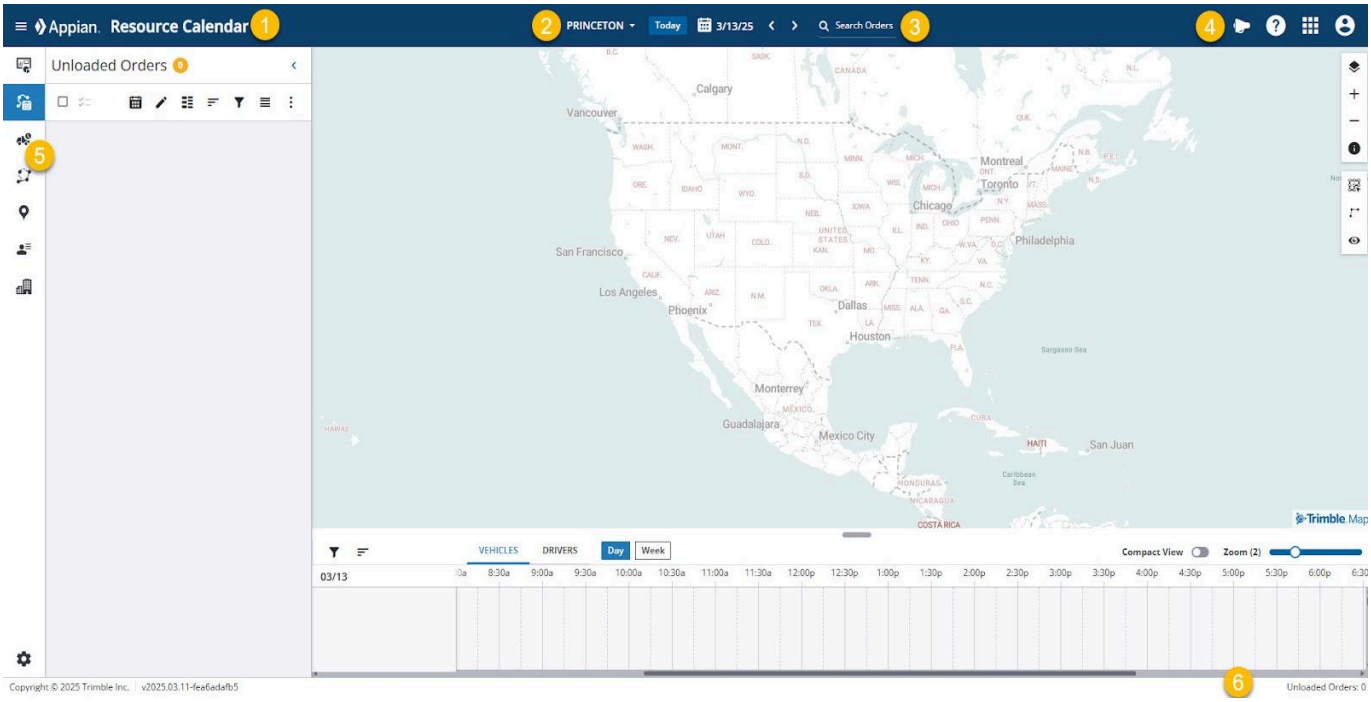
- Bento Menu at the top right of Resource Calendar has a link that opens DRTrack in a new tab.
- Show Stop Summary in the more menu (three dots) on the route card or the route stops list opens the route stops page in DRTrack in a new tab.
- Stop Details in the more menu (three dots) on a loaded stop card opens the stop/order details screen in DRTrack in a new tab.
    - Order Details in the more menu (three dots) on an unloaded stop card opens the stop/order details screen in DRTrack in a new tab.

Navigating Resource Calendar

1. **Header Menu items** — The header contains the (Hamburger Icon which expands the sidebar if needed. The far right end of the header bar contains a Bento Menu which contains links to other Appian applications, Customer Communications Manager (CCM), Appian Mobile Portal, Reveal (BI) Portal, and DRTrack. This menu also contains links to other Trimble Maps products including Account Manager and Content Tools.

2. **Branch and Date** — This is also located in the header. These contain the Branch selection and current dispatch date selection boxes. These two selections will be applied to all of the other navigation from the sidebar.
3. **Order Search** — Located to the right of the date field. Allows you to search for both loaded and unloaded orders on your current branch. Search results appear when three or more values are entered in the field. Unloaded orders appear gray, and loaded orders appear with their corresponding route color. The search can look up to 14 days back and 30 days forward from today's date. The criteria you can put into the search to look for orders can be one of the following:
   - Order ID
   - Account ID
   - Account Name
   - Address
   - City

   Address and City search criteria will query the account or shipping address information, whichever is relevant.
4. **Announcements** — Notifications about product updates and other announcements will be displayed here.
5. **Left Sidebar** — The left sidebar contains navigation icons for:
   - **Dashboard** — Displays map, bar charts, and route chart for the current dispatch day.
   - **Resource Calendar** — provides planners with many ways to plan and schedule unrouted orders such as via the map view or by leveraging drag and drop capability on the calendar view by placing orders on the correct resources (drivers or assets) at the correct delivery times.
   - **Dispatch** — Assign drivers, devices, and assets to routes. From here you can export routes to a variety of mobility and tracking integrations, as well as send routes to Customer Communications Manager (CCM) if you are a licensed user.
   - **Optimize Sequence** — uses the Appian algorithm to put stops on a route in the most optimal sequence while still meeting all of the constraints provided in the order, truck and algorithm settings.
   - **Points of Interest (POI)** — Lets you create and manage points of interest (POIs).
   - **Accounts** — View and edit customer accounts.
   - **Preferences** — Adjust Resource Calendar preferences and other options.
   - Organization and Management — Manage Branches, Dispatch Groups, Assets, and Trucks.
6. **Footer Summary Statistics** — If there are unloaded orders available for the branch and dispatch day selected, the footer will contain summary statistics for the unloaded orders. If there are routes built, the footer will contain additional summary information about the route.

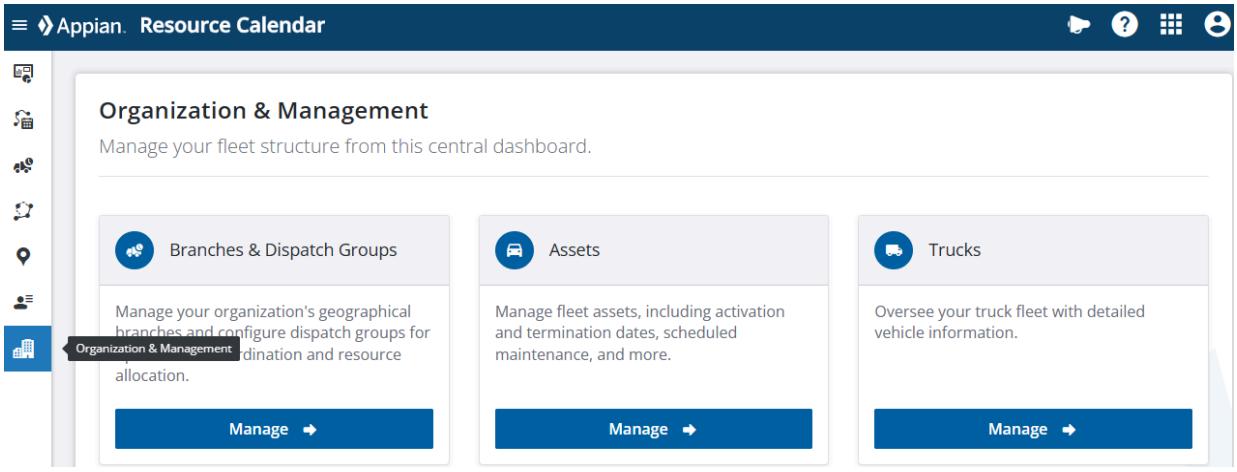


The route calendar panel can be made larger by grabbing the handle and pulling up. In the same manner, the calendar can be made only a fraction of the size to display more of the map view.

Organization & Management

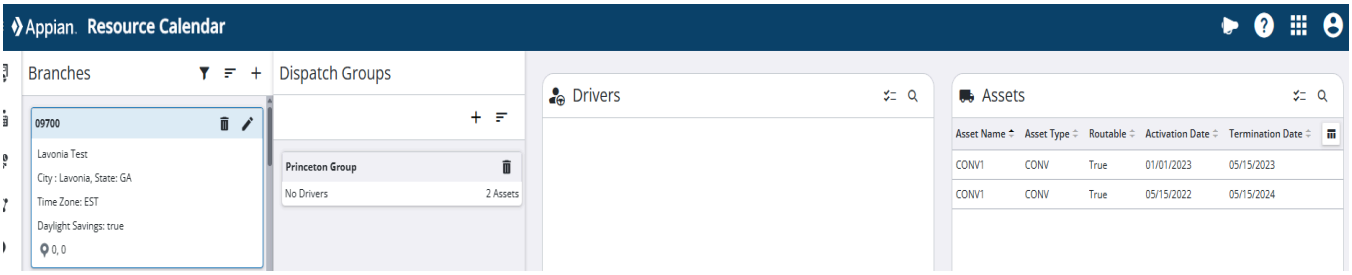
Organization & Management is Resource Calendar's page with links used to set up and manage your organization's Branches, Dispatch Groups, Assets, and Trucks. See the User Permissions Table for requirements.

1. Click on the three lines in the top left corner.
2. Scroll down to *Organization & Management* to start managing your fleet.



Branches

Branches are the physical distribution locations where Assets (vehicles) are dispatched. Organizations can set up one or multiple Branches. The *Branches* page displays a list of your Branches and their Dispatch groups with corresponding Drivers and Assets.

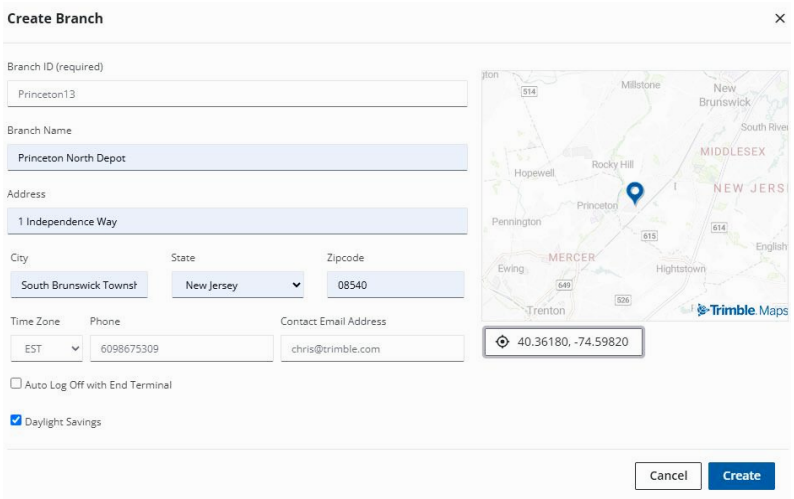


Add a Branch

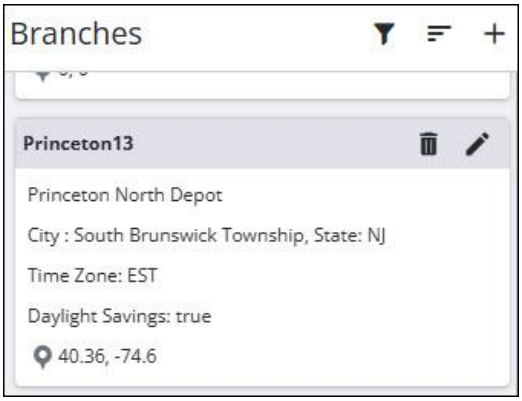
Creating a Branch is the first step in planning and managing your Routes. Without a Branch, users cannot create Dispatch groups, or assign Assets and Drivers.

Click on the + button at the top of the *Branches* page to open the *Create Branch* window (see Figure below).

1. Enter the Branch information.
   - Branch ID is the only required field, but it is recommended to complete all fields in the form.
2. Check the *Auto Log Off with End Terminal* box to allow drivers to automatically log off a Route when it crosses the branch's end terminal geofence (latitude and longitude).
3. (Optional) Drag the blue Branch pin to the correct location on the map to pin it, or enter its GPS coordinates.



4. Click on *Create* to finish and add the new Branch card on your list.



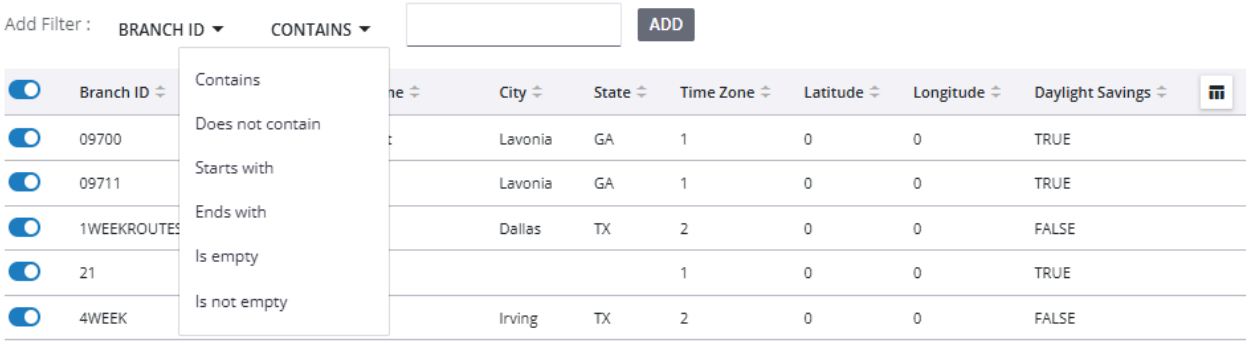
Edit or Delete a Branch

1. Navigate to the *Branches* list.
2. Scroll to find the desired *Branch* card (see Figure above).
3. Select one of the following — Click on the trash can to **delete** the Branch, or the pen to **edit** a Branch.

Filter Branches

Narrow your *Branch* list with filter options so only specific Branches appears:

1. Click on the filter button at the top of the *Branches* page and select *Filter*.
2. Select how your search term is applied to that field (e.g., Contains).
3. Enter your search term (e.g., Princeton).
4. Click on *Add*.

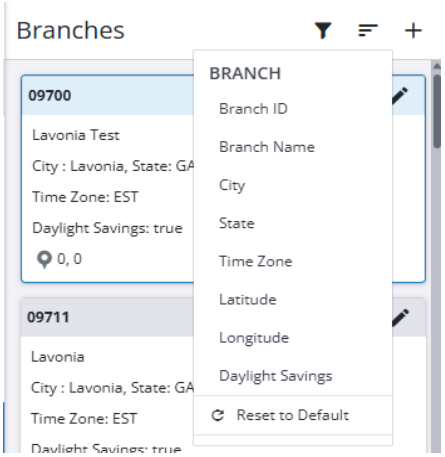


5. Select *DONE* at the bottom of the screen when you are done using the Filter tool.

Sort Branches

Sort all Branches so they appear in a particular order.

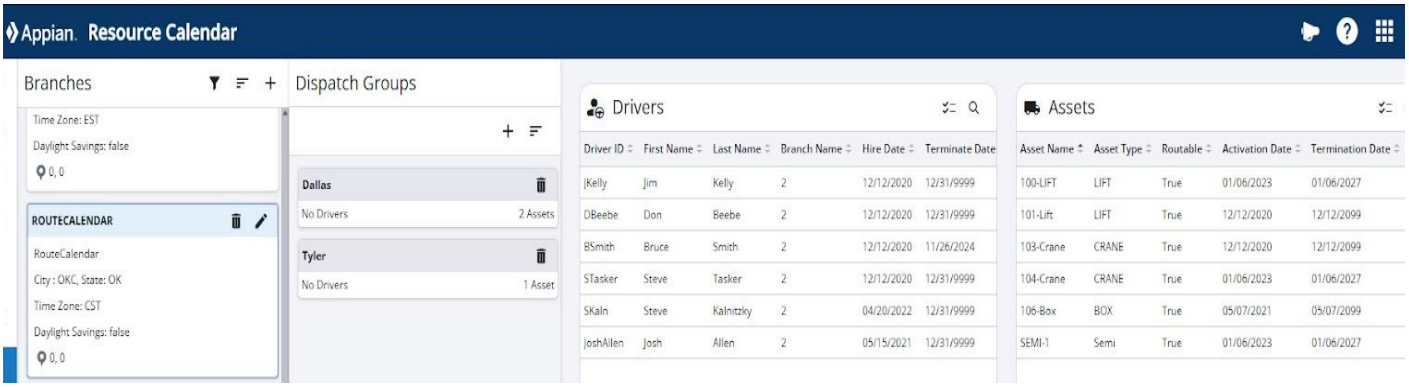
1. Click on the Sort button.
2. Select how you want to organize your list of Branches (e.g., by Time Zone, Branch Name).
3. Click on *Reset to Default* to delete the selected sort options.



Dispatch Groups

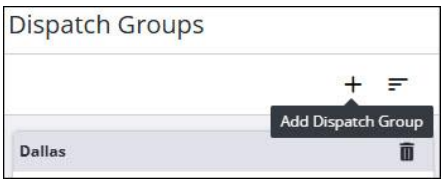
Some companies may have several Branch locations in the same city or region. The Dispatch Groups feature, in Route Calendar, essentially promotes the Branch to a Region and the groups act as the local Branch or terminal.

- Dispatch groups are subgroups of a Branch and cannot be shared across Branches.
- This limits the information you see on the calendar, Route board, and Route page to only the information (assets, drivers) that is assigned to that particular Dispatch Group (local terminal).
- When you open a Branch's *Branches* and *Dispatch Groups* page, the Branch's full list of *Drivers* and *Assets* are available.
- See the User Permissions Table for the permissions required to view, create, modify, and delete Branches.



Create a Dispatch Group

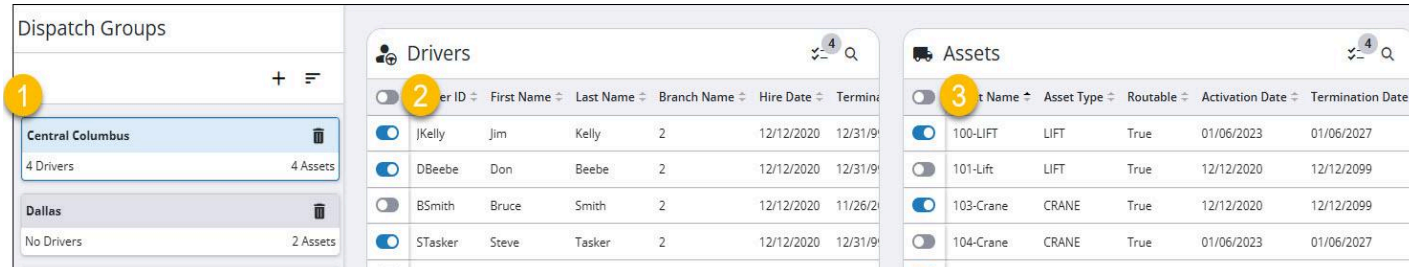
1. Navigate to the *Dispatch Groups* panel and select *Add Dispatch Group* (the + button).



2. Name the Group and click on *Enter*.
3. View the new Group in your Dispatch Groups list.

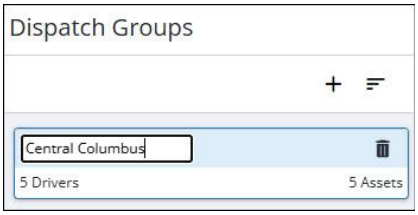
Edit a Dispatch Group

By default, all of the Assets and Drivers of a Branch are added to a newly created Dispatch Group.



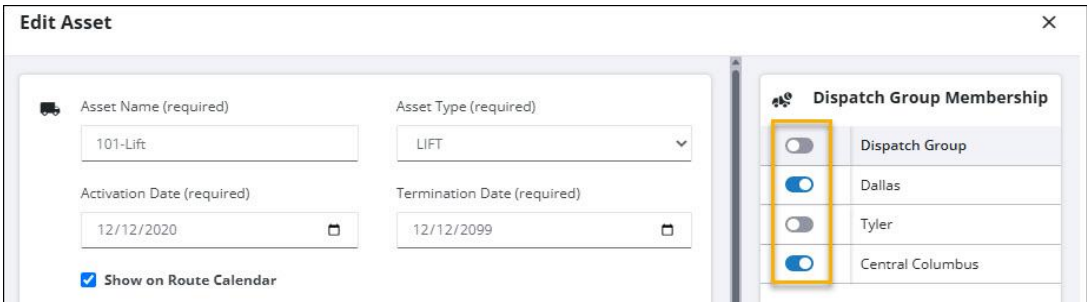
1. Click the name of the group to display the existing drivers and assets in that group.
2. Select the toggle button to add (button right) or remove (button left) drivers from the group. Toggle on the button at the top to include all drivers.
3. Repeat with the assets you want to include in the group.
4. Your changes save automatically.

Separately, you can edit a dispatch group's name only by double-clicking the name in its card.



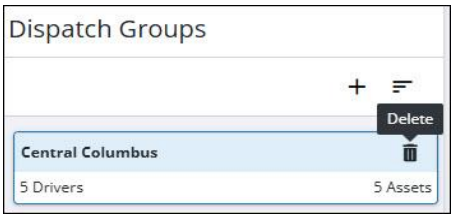
Edit Asset Dialog

Once an asset is added to a dispatch group, that group is displayed when you edit the asset on the **Assets** page. Go to **Organization & Management** > **Assets** and select the pencil icon next to an asset to edit it. Use the toggle buttons to add (button right) or remove (button left) the asset from a dispatch group.



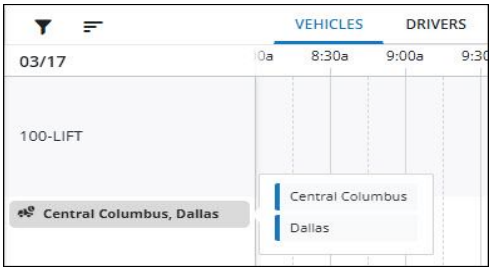
Delete a Dispatch Group

Select the trash can icon next to a group to delete it.



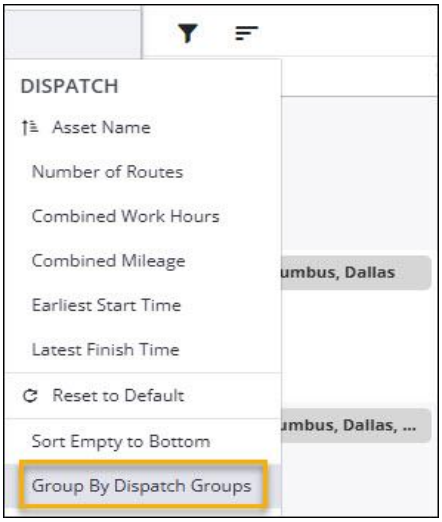
Dispatch Groups on the Calendar

After you have created dispatch groups, you will see them on the Calendar.



You can also filter the calendar to **Group by Dispatch Groups**.

- Primary grouping divides by dispatch group and groups are listed in Dispatch Group name order.
- Sorting within the dispatch group - driver or asset name by whichever sort criteria the user has set.
- If there is a driver or asset in multiple dispatch groups - display their name in the first group, and hide their name in the second, third, etc dispatch group to maintain consistency with only showing a driver/asset once.



Assets

Resource Calendar uses the terms *Assets* and *Trucks* to differentiate between the fleet's actual vehicles (Assets), and the set of rules (Trucks) the routing algorithm uses to build Routes for those Assets.

Each Asset has a name and type, created by the user, in a format that best identifies and sorts vehicles in ARC.

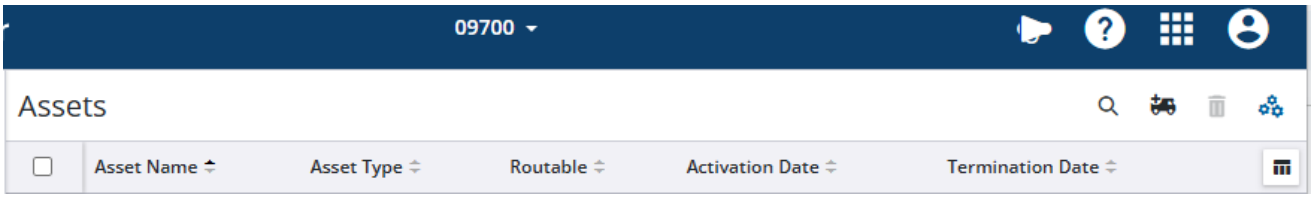
Assets

Asset Name	Asset Type	Routable	Activation Date	Termination Date
TestTruck1	LIFT	True	03/13/2025	03/31/2035
TestTruck2	BOX	True	03/13/2025	03/13/2035
TestTruck3	Semi	True	03/13/2025	03/13/2035

Create An Asset Type

Create Asset Types for all of the Assets in your fleet before adding an Asset.

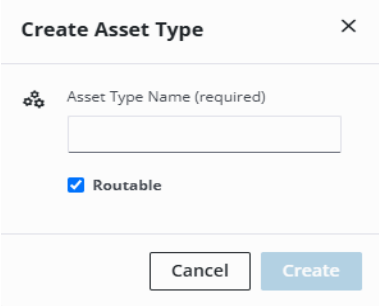
1. Click on the gears button (*Show Asset Types)* at the top right of the *Assets* page to view available Asset Types.



2. Select the **+** button (*Create Asset Type)* at the top of the *Asset Types* panel to create a new Type.
3. Enter an Asset Type name that best describes the **type of vehicle** in your fleet.

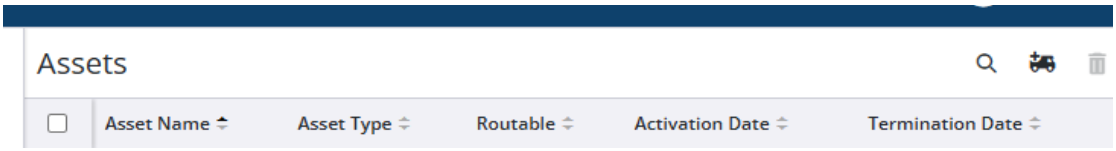
- Types are a standard, shared description of the vehicle (e.g., Box, Lift, Semi).

4. Uncheck the *Routable* box if you **do not** want to add the Asset for routing.
5. Click on *Create* to finish and add an Asset
   - Continue creating Asset types until you have your entire fleet entered.

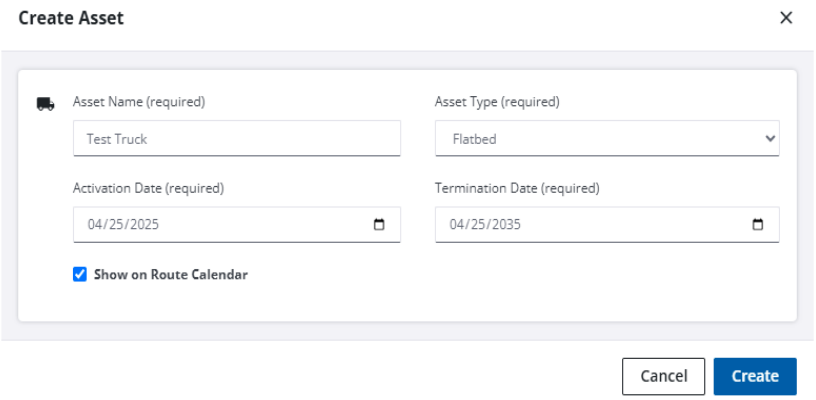


Add an Asset

1. Click on the truck button (*Create Asset)* at the top of the *Assets* page.

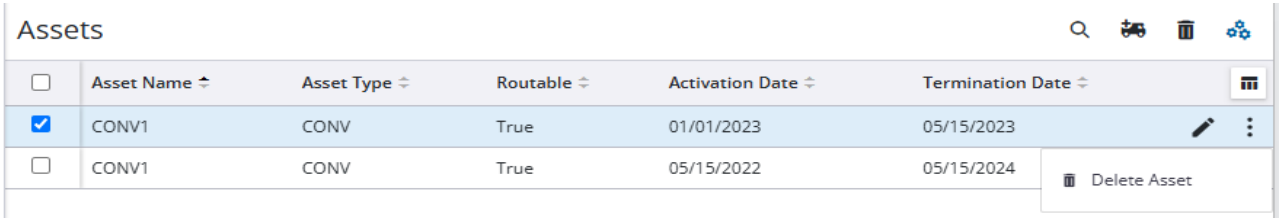


2. Enter the Asset information (all fields are required):
   - **Asset Name** — Unique Vehicle identifier within the Branch.
   - **Asset Type** — Vehicle type created in the section above (e.g., Semi, flatbed, crane).
   - **Activation Date and Termination Date** — Dates automatically default to a 10-year period from today's date.
3. Uncheck the *Show on Route Calendar* if you **do not** want the Asset to appear on the calendar for planning.
4. Click on *Create* to finish and add the Asset to the *Assets* table.



Delete an Asset

1. Hover over the Asset you want to delete until a pencil and three dots appear to the right of the Asset's row.
2. Select the three dots and click on the *Delete Asset* box
   - If an Asset is deleted while it is assigned to a Route, it will remain on that Route. However, it won't be available for future assignments.



3. Click on *Yes* to confirm your Delete decision.

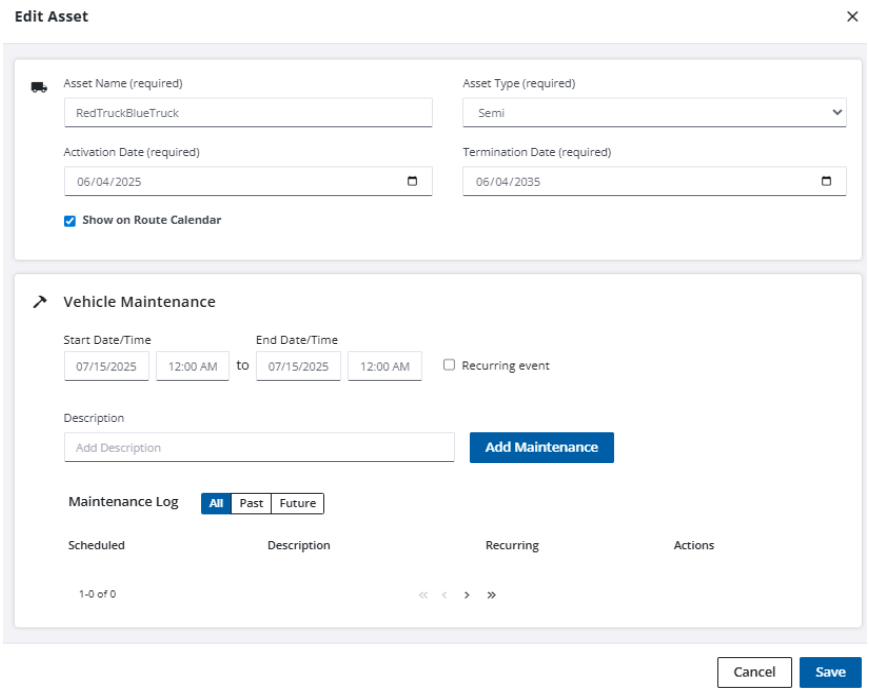
Edit an Asset

1. Hover over the Asset you want to edit until a pencil and three dots appear to the right of the Asset's row in the table.
2. Select the pencil to open the *Edit Asset* box.
3. Change any of the following: Asset's name, type, and activation and/ or termination dates (See Figure above).
4. Click on *Save* to finish editing.

Add Asset Maintenance

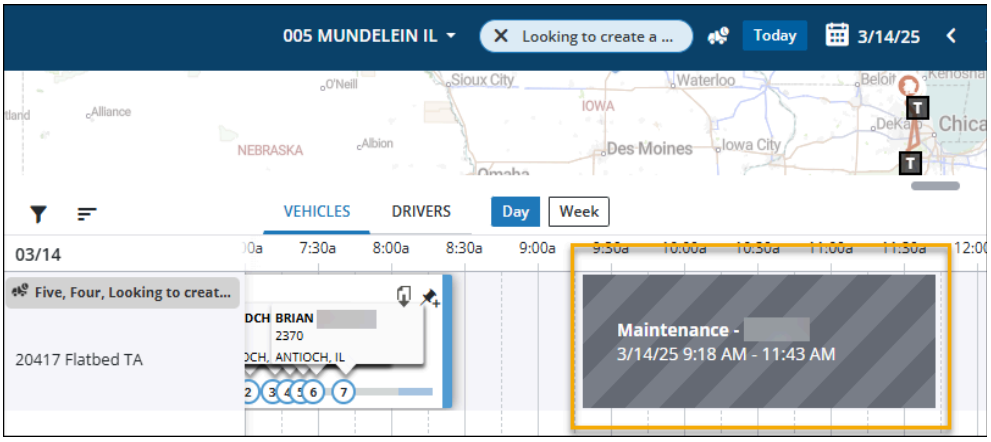
Add Assets to a maintenance schedule to prevent them from being included in a Route when they are out of service.

1. Hoover over the Asset and click on the Edit pen (See Figure above).
2. Enter a start date, end date, and time for the maintenance.
3. Check *Recurring event* if the maintenance is regularly scheduled.
   - Select the maintenance frequency, if the *Recurring Event* box is selected.
4. Add maintenance description (e.g., oil change and tire rotation).
5. Select *Add Maintenance* to add it to the Asset's maintenance log.
6. Click on *Save* to finish adding.



View Assets Undergoing Maintenance

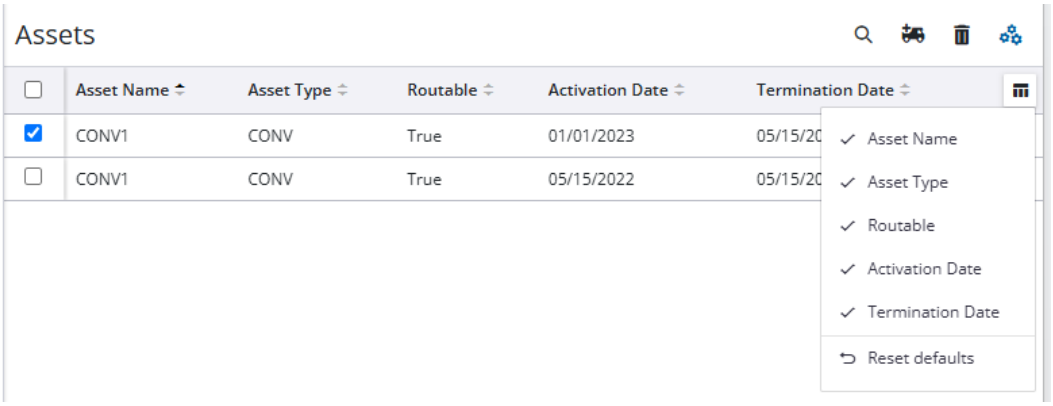
When an asset is undergoing maintenance, it appears in the Dashboard's tracking chart as a grayed out period of time when it is not available.



Search or Filter Assets

Search or filter the display of Assets in the *Assets* page table using the features shown below.

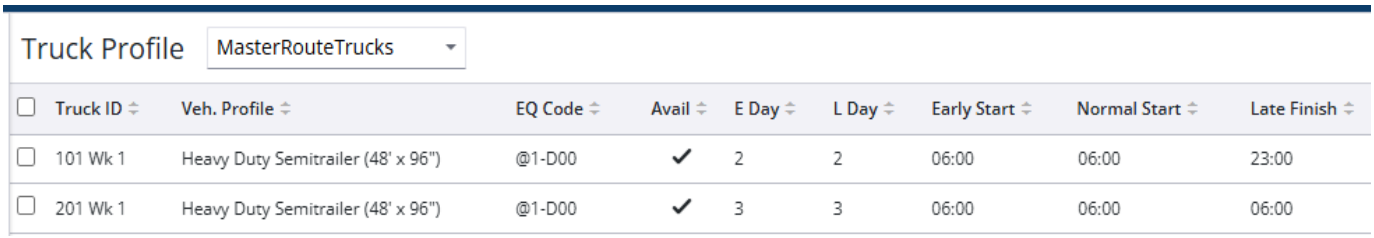
1. Click on a column header to organize the chart in ascending or descending order.
2. Click on the magnifying glass to search for an Asset by name.
3. Click on the Configuration button in the upper right to select the information to display in the *Assets* table.



Trucks

A **Truck** is a collection of settings that govern how a Route is built. It uses dozens of data to optimize the algorithm and generate an efficient Route e.g., type of Asset (vehicle), hours of availability, costs, and special equipment, etc.

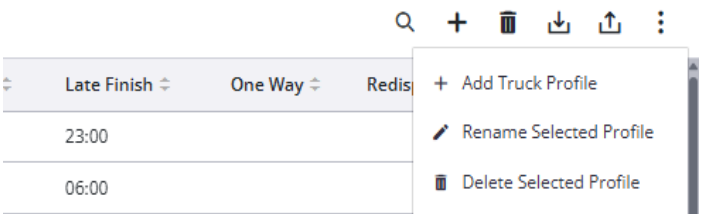
- View the Trucks for the selected profile using the Truck Profile table.
- Add and remove table columns by clicking on the Layout Configuration button to the right of the headers.



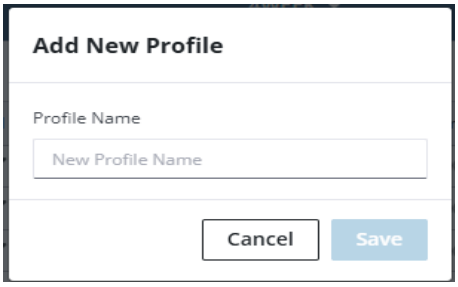
Create a Truck Profile

Create a Truck Profile to organize Trucks into groups to easily find and manage them. Create a Truck profile before adding a Truck.

1. Click on the More Menu (three dots) on the top right of the *Truck Profile* page.
2. Select + *Add Truck Profile.*



3. Enter a Truck Profile name and click *Save*.

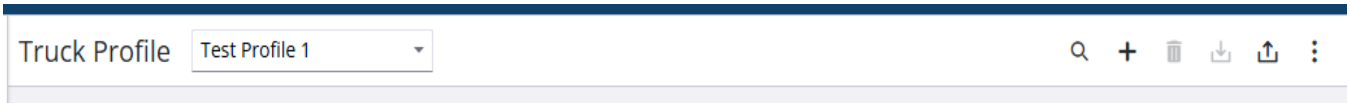


4. Edit a Profile name or delete a Truck Profile using the same More Menu (see Figure above).
   - If you delete a Truck Profile, **all the Truck records associated with that Profile are also deleted.**

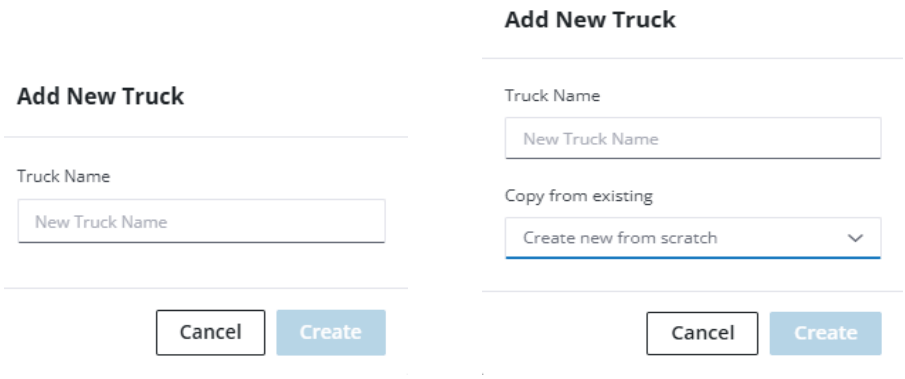
Add a Truck

Trucks establish rules for the Truck Profile to improve planning efficiency and refine routing optimization.

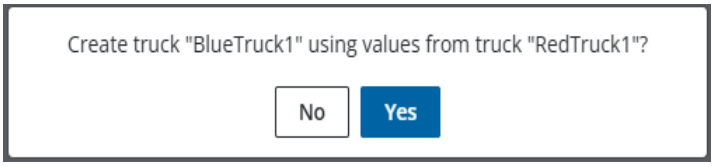
1. Select the Truck Profile you wish to add a Truck to from the drop down menu.
2. Click on the + Plus button at the top of the *Truck Profiles* page to add a new Truck.



3. Enter the Truck name.
4. Determine if you will create a Truck from Scratch or Copy from an Existing Truck.
   - If you choose to **Create from scratch**, click on *Create.*
   - If you want to **Copy from an Existing** Truck (all the Truck rules), choose a Truck from the drop down menu.
     - If you do not have an existing Truck, you will not have the option to Copy.



5. Click on *Yes* to confirm the new Truck creation.



6. Enter the information in the *Create Truck* window.
   - **The Truck ID** — Auto populates and is the Truck name you entered in step 3.
   - **Truck Profile** — (Required) Tells the routing algorithm the type of Asset being routed.
   - **Truck City** — (Required) Address of the Branch where Assets are dispatched.
7. Ensure *Availability* is toggled on (blue) to include the Truck in routing options.
8. Customize your Truck — Enter *Work Rules*, *Cost*, *Volumes & UserFields*, and *Configurations* to create general rules Routing must follow when selecting the truck. If the rules are broken, violations occur (See Prescriptive Intelligence).
   - **Earliest Day** — The earliest date an Asset may depart based on the established dispatch date.
     - E.g., The Date of Dispatch is day 1. Enter a 1 in this field if the Assets can leave on the first day.
   - **Latest Day** — The latest date an Asset can return to the terminal calculated from the dispatch date.
     - E.g., A weekly Route might also have an *Earliest Day* of 1, but a *Latest Day* of 7.
9. Click on *Create* to finish.

Delete a Truck

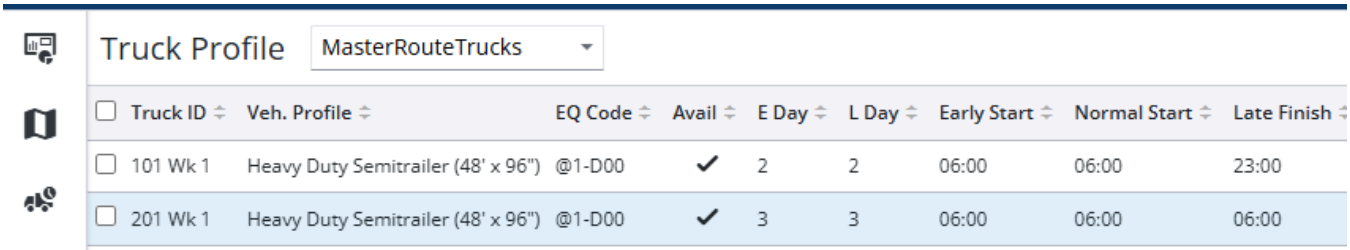
Deleting the Truck does not impact the current Route or the Master Truck Record.

1. Follow the Edit a Truck steps to get to the Edit Truck Window.
2. Click on the *Delete Truck* button at the bottom of the window, and click the *Yes* confirmation button to finish.

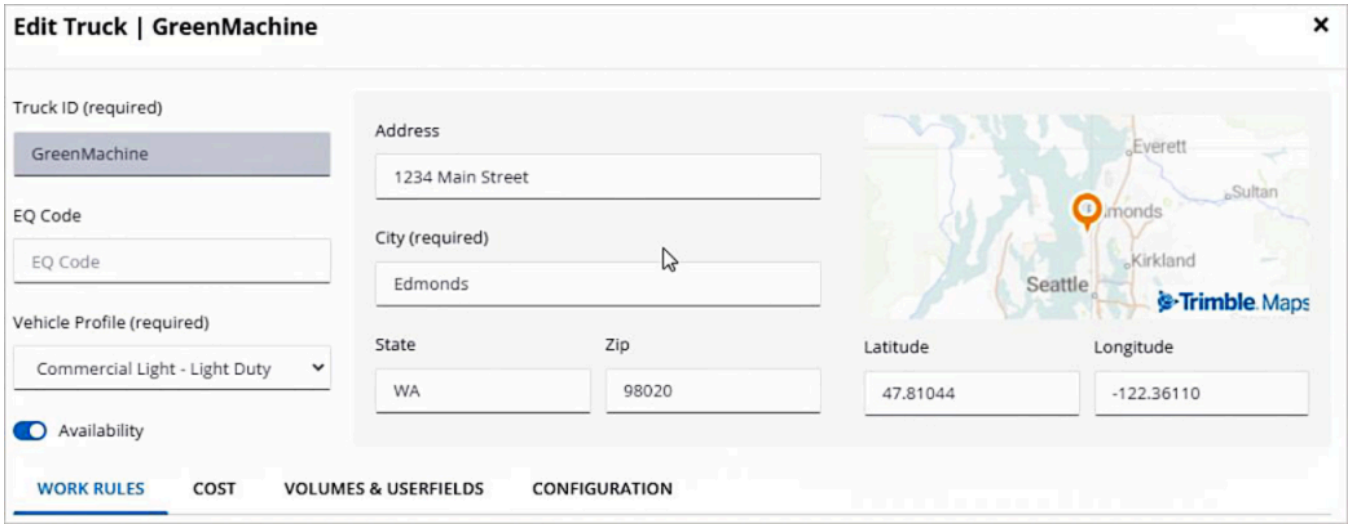
Edit a Truck

Ensure your Truck and Truck profiles are updated as your Assets (fleet) changes to fully optimize your algorithms:

1. Scroll or filter until you locate the Truck ID you wish to edit and click when highlighted.



2. Edit the necessary Truck info in the *Edit Truck* window (does not impact Master Record), and click on *Save*.



Search and Sort Truck Records

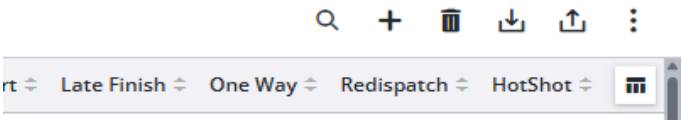
Search or sort through Truck records to find a specific Profile.

1. Click the magnifying glass at the top-right of the *Truck Profile* page to search using a key word.
2. Click any column header to sort in ascending or descending order. Slide headers left and right to organize the order.

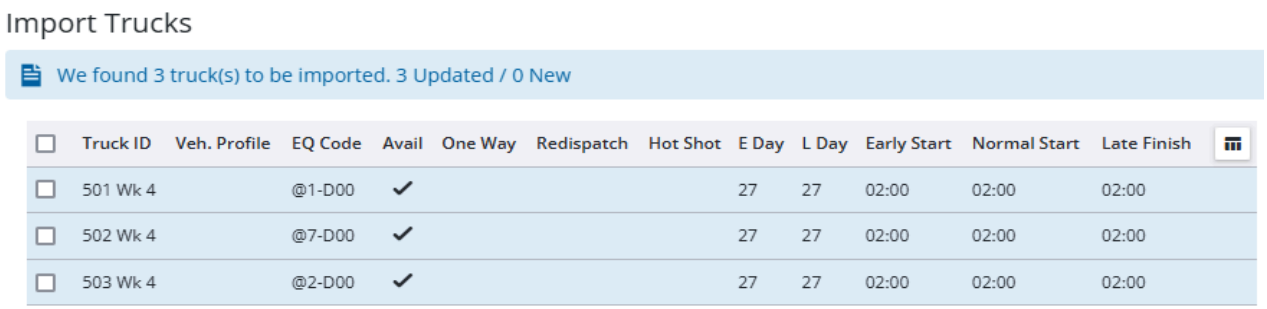
Upload a Truck Master Record

A Truck Master Record is a comma-separated values file (CSV), which contains all the necessary Truck information. This option allows the user to make large, sweeping changes to their fleet.

1. Click on the Upload button in the top right of the *Truck Profile* page.



2. Click on the link at the bottom of the *Import Trucks* window to download the template and **create a new record** or Skip to Step 3 to **upload an existing record**.
   a. Open the template in your favorite spreadsheet application (e.g. Excel).
   b. Add all relevant Truck information.
3. Upload the Truck Master record.
   a. Click *Choose file to Upload* to locate the file on your computer, or drag the file to the window.
   b. Review the Truck IDs in the preview window and check the IDs you wish to update or add with the import.
4. Click on the *Save* button to start using the Truck record.



Download a Truck Master Record

1. Check the boxes next to each Truck ID.
2. Click the *Export Trucks* button to download to your browser's default location (usually your Downloads folder).

Dashboard

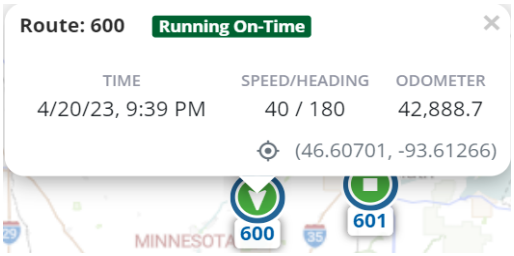
The Dashboard displays Route, Stops, and Driver information for the selected dispatch day using the GPS data relayed from the Driver's devices. Use three different visuals to gain insights — Map, Routes and Driver graphs, and Routes and Stops Charts. Use the Footer for quick statistics. If there is no GPS data, the Dashboard map and charts are blank.

Dashboard Map

View the current location of all the Assets, assigned to Routes, that are in progress on the expandable map, including:

- The Driver's last position when they logged out of (or completed) the Route.
- The progress of the Route — Green Assets are on time or ahead of schedule; red Assets are behind schedule.
    - The outer icon ring indicates the percentage of the Route that is complete.
- The Driver's current activity indicated by the shape in the color-coded circle.
    - Square — Driver is stopped
    - Triangle — Driver is moving with a compass heading
    - Check — The Route is complete

Click on the circle to see the Route name, start time, on-time indicator, odometer reading at the beginning of the Route, and last reported GPS location.



Examples and explanations of the map's Asset icons:

Icon indicates Route 571 is ahead of schedule, in motion, heading north, and about 80% complete.

Icon indicates Route 544 finished (logged out) ahead of schedule and 100% complete.

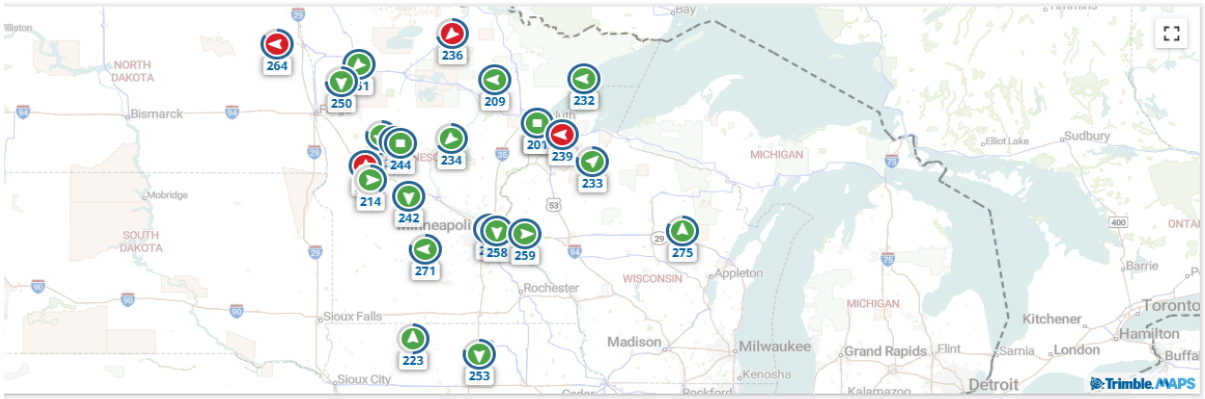
Icon indicates Route 501 is stopped, ahead of schedule, Driver is still logged in, and 100% complete.

Icon indicates Route 575 is stopped, behind schedule, and approximately 50% complete.

Icon indicates Route 587 is in motion, heading south, behind schedule, and about 75% complete.

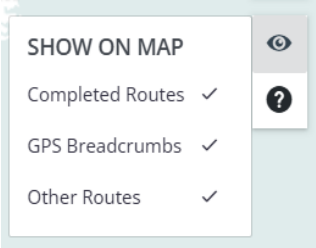
Icon indicates Route 417 finished (logged out) behind schedule, and 100% complete.

Click on the map **?** to display the legend for more icon descriptions

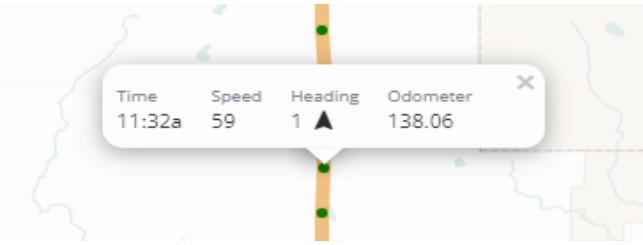


- Use the Show on Map tool to toggle between views — Completed Routes, GPS breadcrumbs, or Other Routes.

- Toggle on the *Completed Routes* option to hide all completed Routes on the map.
- Toggle on *Other Routes to* show all active Routes. Toggle off to show only the current Route.



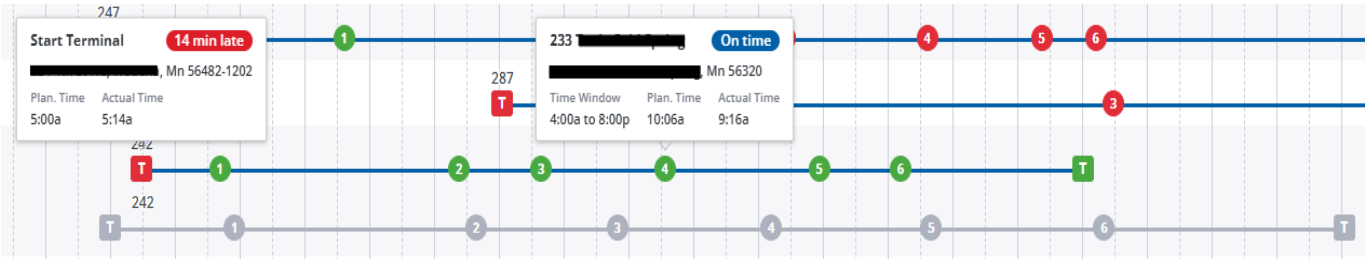
- Toggle on *GPS Breadcrumbs* to display each GPS ping in the Route as a green circle on the map.
  - Select a circle to see details at the time of the ping — the Asset's speed, the header, and the odometer. Information available is based on your GPS Integration option.



Routes and Drivers Graphs

Toggle between *Routes* and *Drivers* (bottom) to see detailed real-time tracking in an expandable graph.

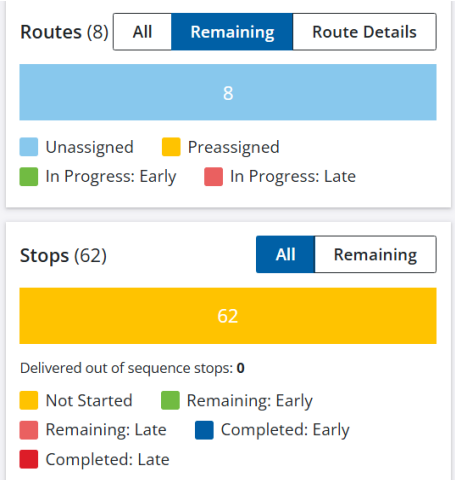
- Stops are represented as circles — remaining Stops are outlined; completed Stops are color-filled.
  - Green Stops — On time, ahead of the estimated schedule, or delivered early.
  - Red Stops— Behind the estimated schedule or delivered late.
  - Current time is indicated by the blue vertical line topped with a truck icon.
- Right-click on the Stop circle to view Stop Details or Stop Summary in DRTrack or edit the Stop in RC.
- Use sort and filter tools to refine the Route list from top to bottom (E.g., by Route status or Dispatch info).
- Routes longer than 31 days are not displayed on the graph.
- Expand Route rows in the graph to compare actual Stop times to planned Stop times. The planned Route appears below the actual Route.



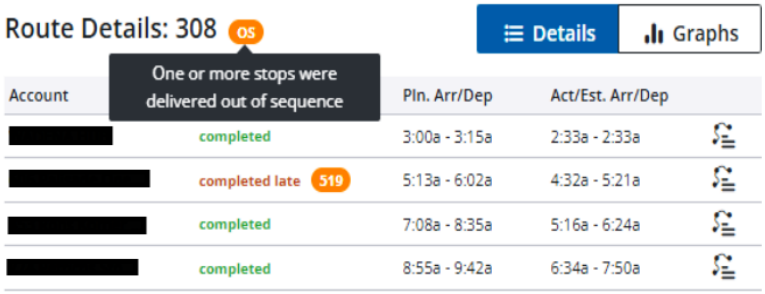
Route and Stops Charts

Assess the health of each Route and Stop as they progress using these charts and tables in the right panel.

- Toggle between *All* or *Remaining* to narrow the view to just the Routes and Stops not completed.
- The number in parentheses represents the total number of Routes or Stops while the number in the color-coded blocks represents the number for that particular category.



- Click on the *Route Details* tab to view Stop Status and times information on a Single Route (explained below).
  - Click on the Stop Details button in each row of the table to open the Stop Details page in DRTrack.
  - View Routes that were completed out of the provided sequence (orange badge).

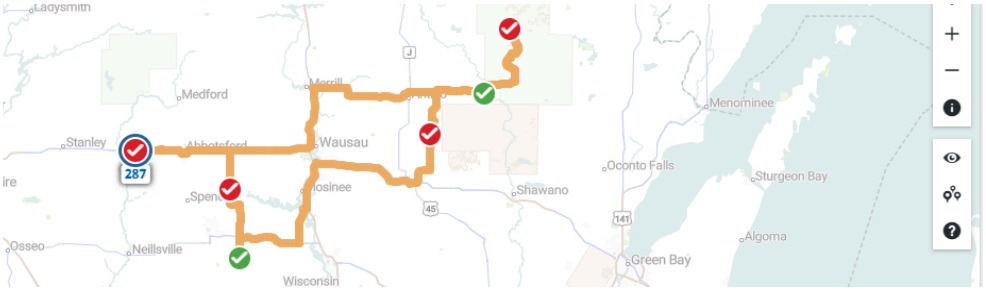


Single Route View

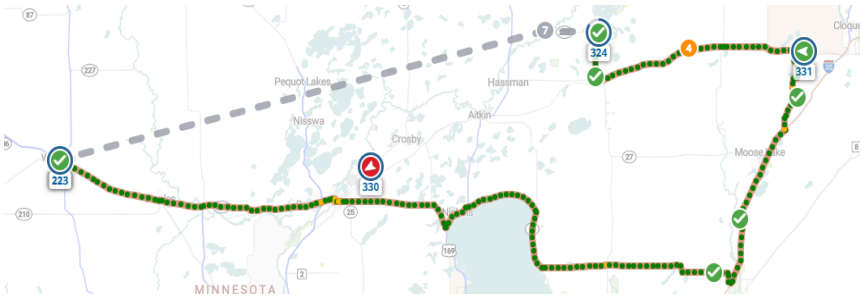
Click a Device (blue outlined circle) to zoom in the map and display the Single Route in progress:

- The Route status is indicated by the color and shape inside of that circle:
  - Green circle — The Stop is on time or estimated to arrive early.
  - Red circle — The Stop is estimated to arrive late or it was delivered past the estimated timeframe.
  - Checkmark — The Stop is completed; a number indicates an incomplete Stop.
  - Blue outline — Indicates its a device and the percentage of the Route that is complete.

- Hover over a Stop to display information about it — time window and planned, estimated, and actual delivery times.



- Click on the Stop to display the *Edit Route* button and return to the Route Planning page, or zoom in to view completed / incomplete segments.
    - Completed segments are indicated by solid lines; incomplete segments have dashed.



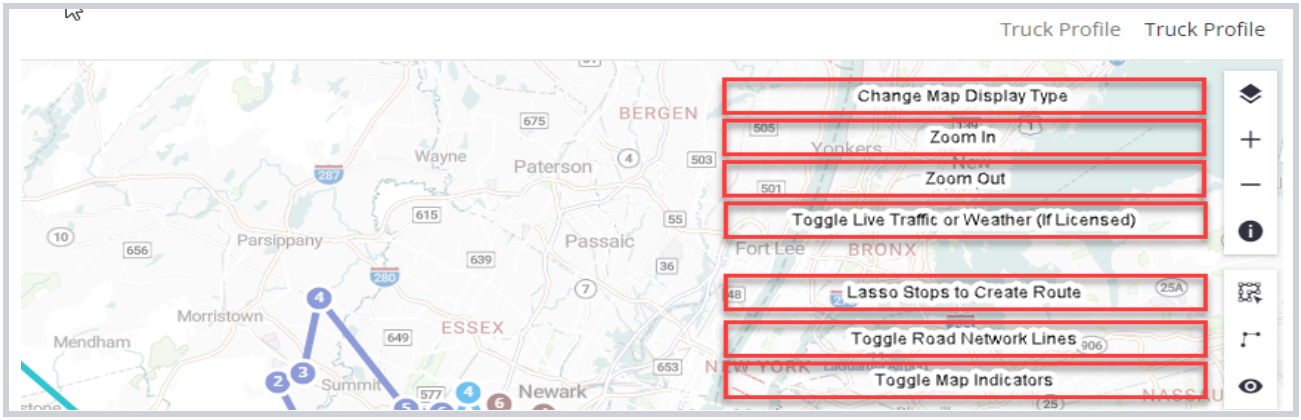
Footer

The Footer appears on selected pages and provides an unloaded order summary for the chosen Dispatch day(s). It is synced to Route planning actions, and if a Route is built, it includes those details for real-time statistics.

Resource Calendar

Map Panel

The map interface allows you to choose different map styles along with traffic and weather overlays. Route Line Styles allows you to choose how you want to view your routes; Crow Fly or Road Network. Show On Map gives you the ability to show or hide Unloaded Stops, Loaded Stops, and/or route lines. See Pinning a Route for additional features.



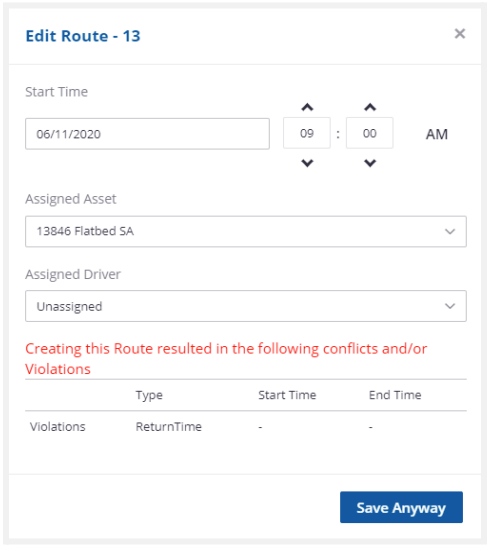
Planning Routes on the Calendar

Lasso Stops on the Map

The Lasso Tool allows you to quickly create a route on the map by 'lassoing' around the stops you want to include in the route. Once you have lassoed the stops, the 'Build Route' popup will appear which allows you to assign an Asset and a Driver(optional) to the route, along with the Load Date and Route Name(optional). Once the route is created on the map, if the proper assignments on drivers or assets are made, a corresponding Route Card will be created on the Route Calendar.

NOTE: The normal lasso behavior is to click each time you want to create an anchor for the boundary and then double-click to complete the shape. An alternate lasso behavior can be used by holding down CTRL while lassoing. This behavior will automatically create anchors as the shape is being drawn. Double-clicking still closes the lasso.

Occasionally, a stop(s) will not be added to a route. This will happen if a violation occurs due to adding the stop(s) or if more stops are lassoed than your set parameters will allow (time window, drive time, etc). The algorithm will fit as many lassoed stops as long as violations do not occur.



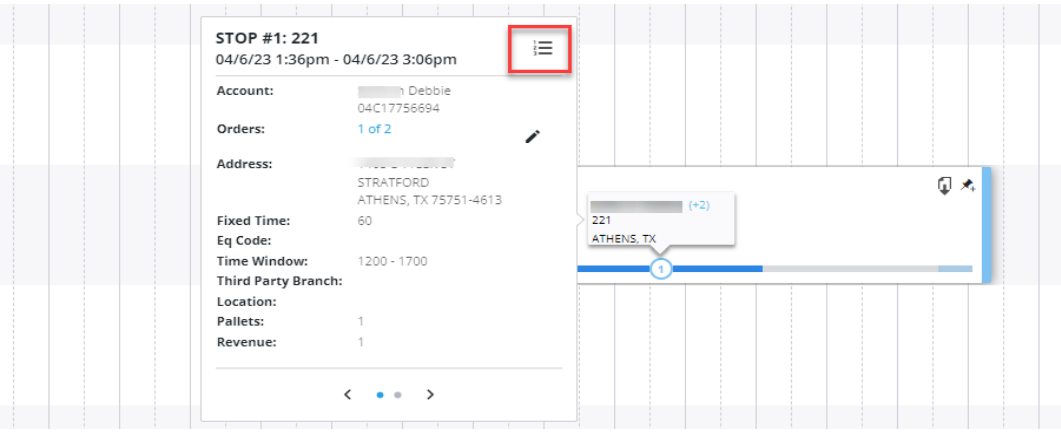
TIP: Double-click the final point of the lasso to finalize the route creation.

Viewing Order Information and Stops on the Map

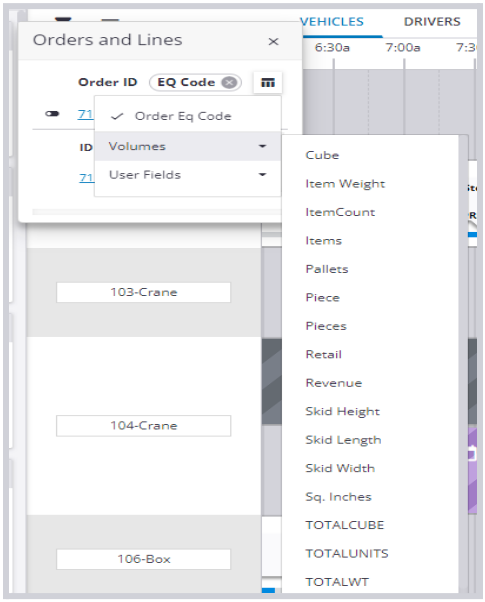
By selecting a stop, loaded or unloaded on the map, a pop-up will appear with information about the selected stop. Unloaded orders and stops are displayed on the map in various circle colors and upon selecting them, a popup of the orders information will appear. Each card has a lightbulb icon in the header for Suggest Routes.

Order & Line Item Details

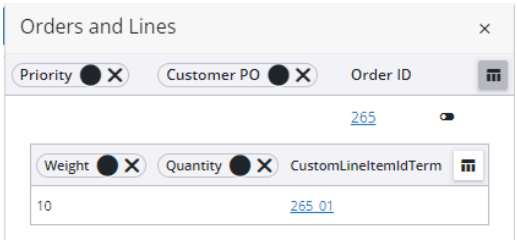
Order and Line Item Details allow you to drill down into the order and its line items to view additional Volume and User Fields. To access the line item view, click the stop card, then click the line item icon.



Once selected, you can pick different data points to view the order and line item. By selecting this icon, any volume or user fields can be added to the grid for visibility.

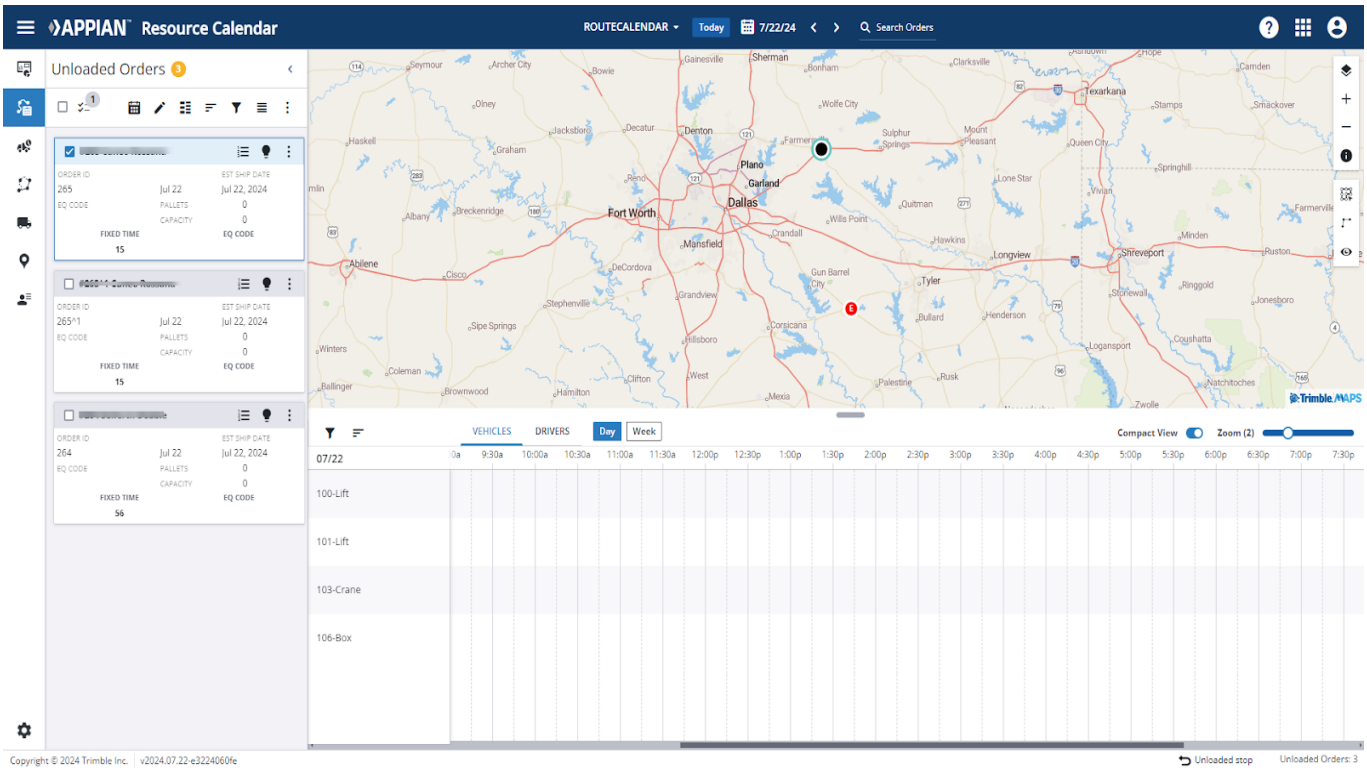


The top section of the card reflects the overall order details; the bottom part will display all line items listed with the individual data points. This view will persist between sessions.

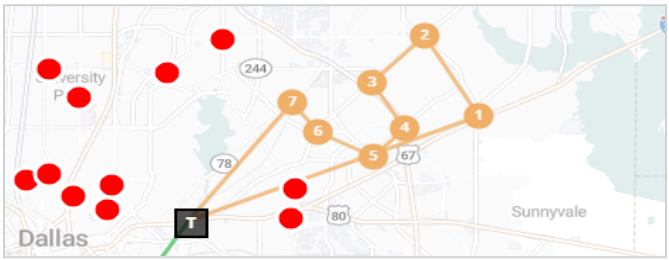


The T symbol on the map is the location of the terminal.

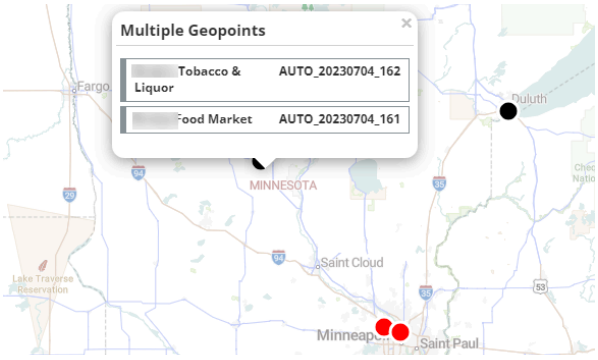
An order that is unloaded, or not planned on a route, will appear on the map as a red circle. When you select an unloaded order on the map, the Unloaded Orders Panel will highlight and scroll to the corresponding unloaded order card.



If an order has been loaded to a route, it will appear as a circle with the color of the route line and its sequence number of the route.



More than one order, loaded or unloaded, at the same geolocation is indicated by a black circle on the map. Once you click on the circle a list of all the orders will appear, as shown below.



Orders that display a gray color on the left are unloaded, while orders with a color other than gray are loaded and the color corresponds with the route it is on. Selecting an order from this list will display the same map stop popups but will also have a back button so you can go back to the list of orders.

You can choose to toggle loaded and/or unloaded orders on and off of the map view by opening up the ‘Show on Map’ icon, and selecting what you want or don’t want to view. If you deselect Route Lines and keep Loaded Stops selected, the map will remove the lines connecting each sequenced loaded stop but will still show the sequenced stops. However, if you deselect Loaded Stops and keep Route Lines selected, the map will remove both loaded stops and route lines.

Viewing Routes on the Map

Route line colors are assigned by Resource Calendar and cannot be changed. When routes are built, the sequence number of each stop appears inside of the circular stop indicators.

You can pan the map by dragging the map to the desired position. The map can be zoomed in and out with a mouse scroll wheel or via icons on the map.

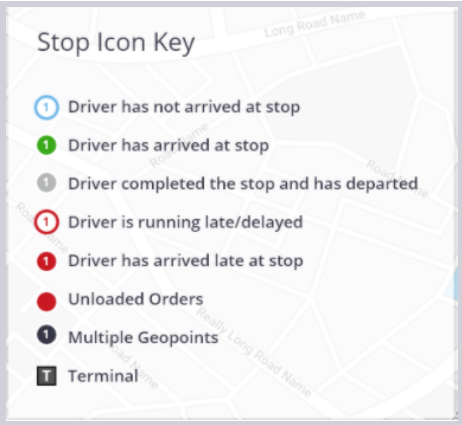
Moving Stops on the Map

Loaded Stops can be moved between route lines by either Ctrl+Drag or Ctrl+Shift+Drag. Loaded stops on a route can also be resequenced with another stop on the same route using the same method. Unloaded stops can also be added to a route from the map.

If moving a stop will cause a violation, Resource Calendar will notify you that the potential move will result in creating violation(s). You can Cancel or Continue with the stop move and accept all violation(s).

Route In Progress

Once a route is logged in, the route on the map will begin to show how the driver is progressing through the route. Once the driver arrives at a stop, the route line behind that stop will turn gray. The stop icons on the route indicate the stop the driver is currently at, if the driver has departed a stop, if stops are at risk of being delayed, etc.



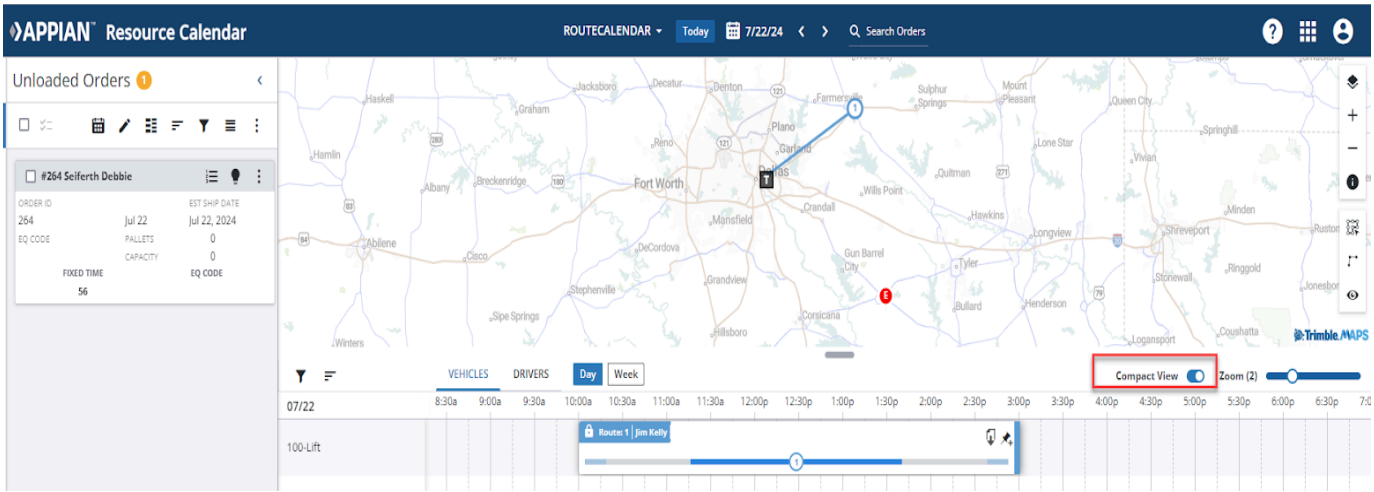
Route Calendar Panel

Gantt View

By showing the Route Calendar in a Gantt view, you are now able to see both the Route Calendar and the map on the same computer screen. The Route Calendar panel is resizable so that you can view as much or as little of the map as you need. Another component added is Zoom Levels. This allows you to view the day as a whole or get a more granular view of a route if needed.

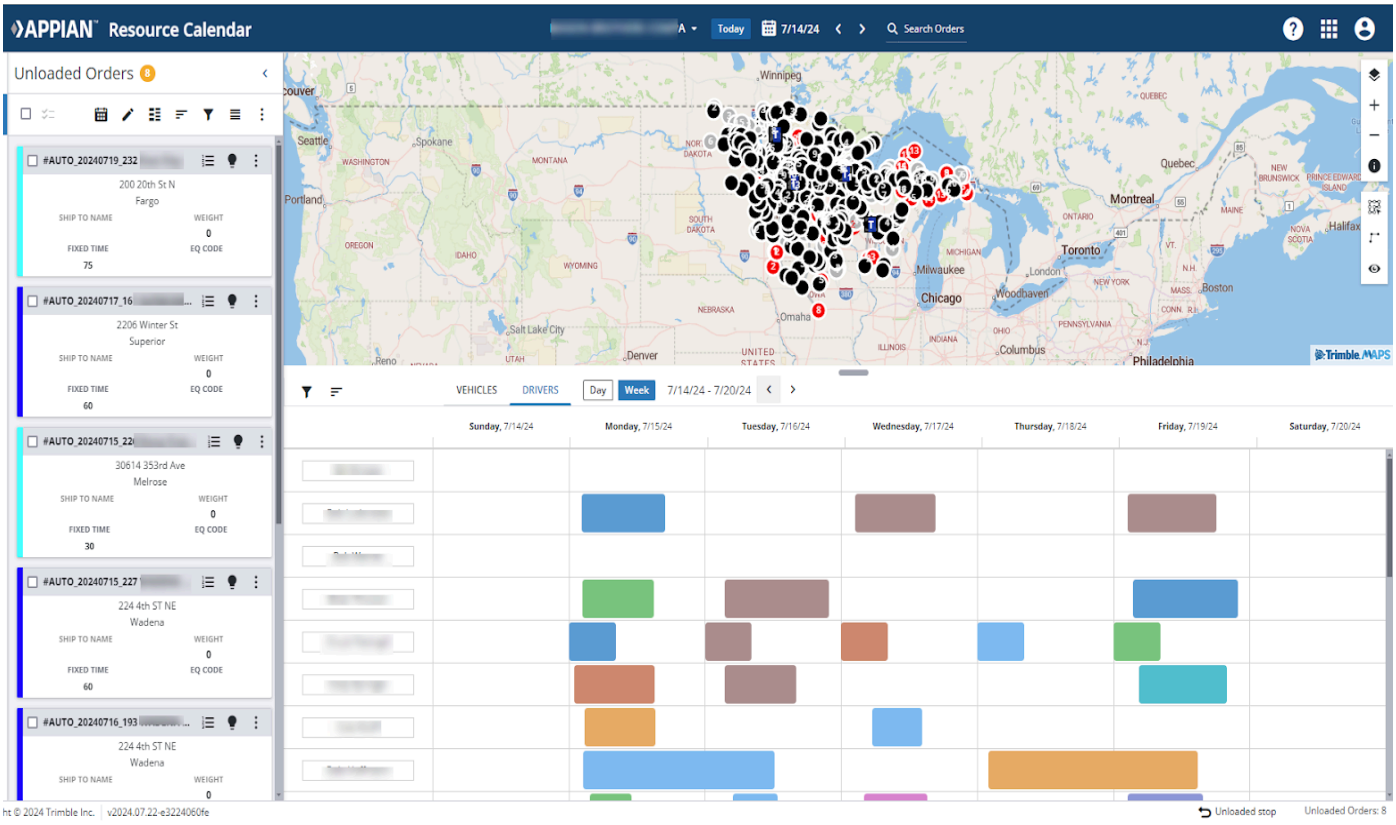
Compact View

A compact view is a condensed version of a Gantt chart that only displays the most essential information, making it easier to view and navigate. In this view, you can see more vehicles or drivers, but less detail is shown on the Route Cards. The compact view can be toggled on and off with the *Compact View* toggle. When enabled, you can see basic stop information by hovering over it. Clicking on the stop brings up a more detailed card. Compact view will persist until disabled.

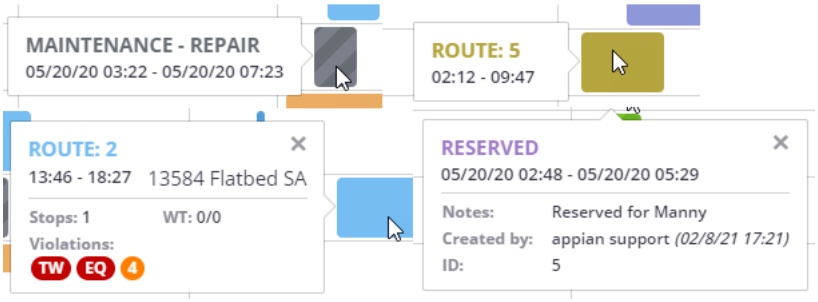


Week View

The Week View shows you a full week of the route schedule including all routes on the map and all unloaded orders available for the week. This allows you to see where there may be openings to schedule another route or move some around.



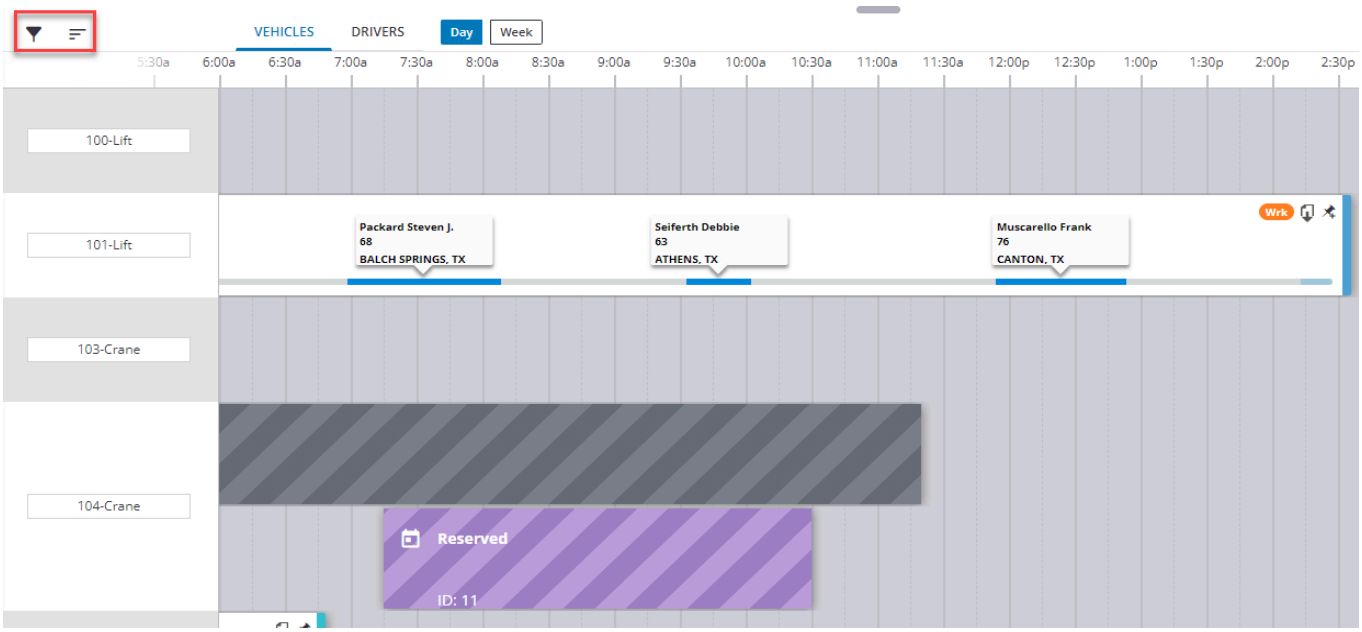
Hovering over a route or Scheduled Time Block shows high-level information.



Clicking on a route or Reservation block provides additional information; PTO and Maintenance blocks can be viewed by hovering.

Advanced Filtering and Sorting

Just like on the Unloaded Orders panel, the Route Calendar allows you to filter and sort routes, located on the Route Calendars Vehicle and Driver view as well as the Week View.



The sort by values includes

- Vehicle/Driver (Depending on what you are viewing).
- Number of Routes on a Vehicle/Driver.
- Combined (Sum) of Work Hours on a Vehicle/Driver.
- Combined (Sum) of Mileage on a Vehicle/Driver.
- Earliest Start Time.
- Latest Finish Time.

After a sort is applied, you can reset the sort order by selecting the sort icon and hitting reset to default. You can also choose to sort empty rows to the bottom.

As changes are made to the route plan, the sort gets applied automatically to account for those changes.

Scheduled Time Blocks

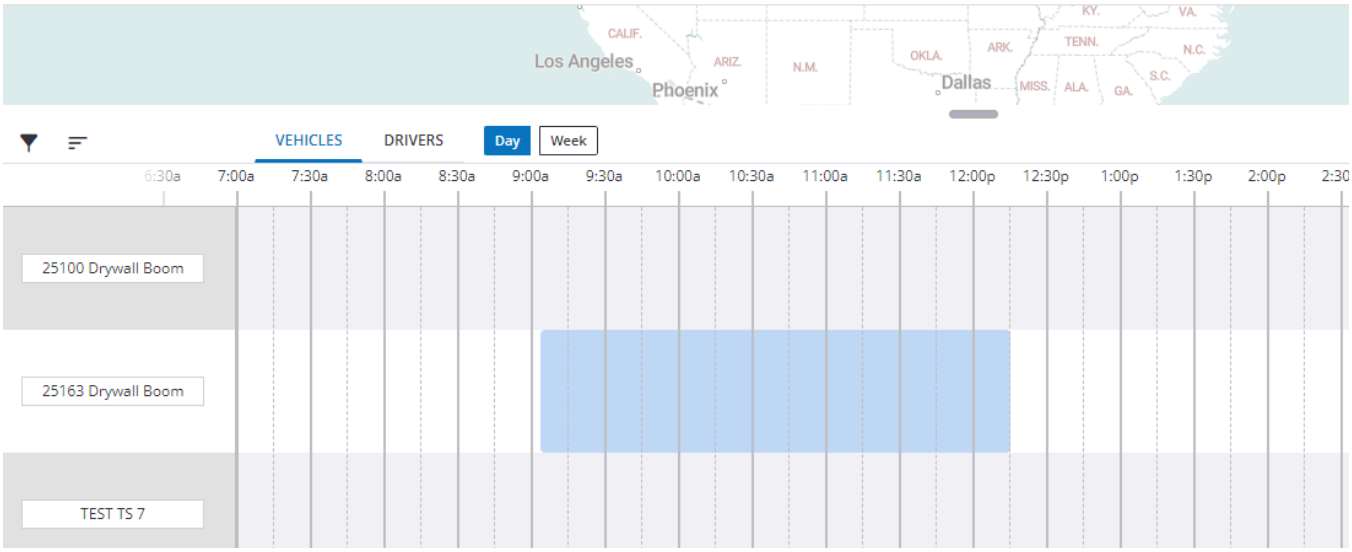
All three scheduled time blocks, Reservation, Driver PTO, and Vehicle Maintenance, are created the same way in Resource Calendar. By selecting a start time on the Route Calendar and dragging to the desired end time, a blue box will appear over the selected area; right-clicking inside of the box will bring up two options depending on what tab you are viewing. If viewing the Vehicle tab the options will be “Create Reservation” or “Schedule Maintenance.” If viewing in the Driver tab the options for maintenance will be replaced with “Manage PTO Periods.”

Reservations

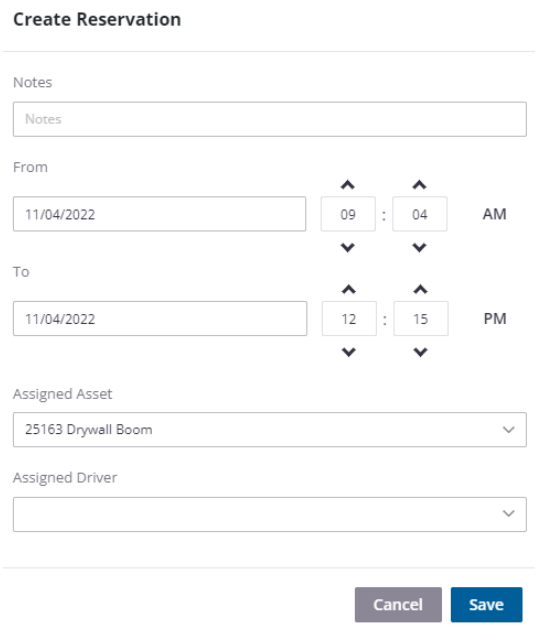
You can create, edit, and delete reservations for a vehicle or driver inside of Resource Calendar's Route Calendar, which also syncs with DRTrack. Reservations will not interfere with Routes that are built at the same time, meaning Schedule Conflict violations will not occur on overlapping Routes.

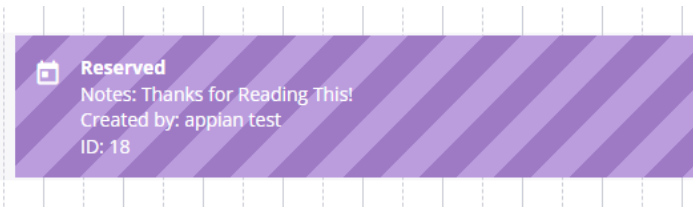
Create a reservation

1. Drag at the start of the reservation time to create a time block on the calendar, highlighted in blue.



2. Right-click the newly-created time block and click *Create Reservation*.
3. Add notes, change the start/ end time, or change the Asset or Driver involved with the reservation in the pop-up window.





Edit or Delete an existing reservation

- Right-click the reservation block and click *Edit*.
- Right-click the reservation block and click *Delete*.

Assign/ Unassign Blocks

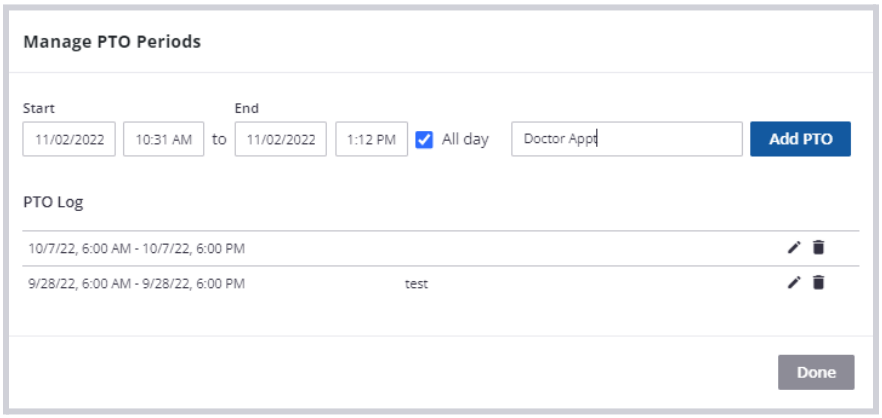
- Drag reservation blocks to Assets to assign them to a truck or driver.
    - Doing so will update the driver, asset, and appropriate time fields accordingly.

To undo an accidental reservation:

- Click either Undo/Redo from the status bar at the bottom of the screen, or
- Click *Undo* from the pop-up message.

Driver PTO

To create a driver PTO block, drag at the start of the reservation time. This will create a time block on the calendar, highlighted in blue. Right-click the newly-created time block and click Manage PTO Periods. The *Manage PTO Periods* window allows you to create, edit, and delete driver PTO. You can also see the PTO log for a driver's past and future PTO blocks. This feature allows you to accurately assign routes to drivers who are available to work.



To edit PTO periods, right-click the PTO block and click **Edit**. To delete a PTO period, right-click the PTO block and click **Delete**.

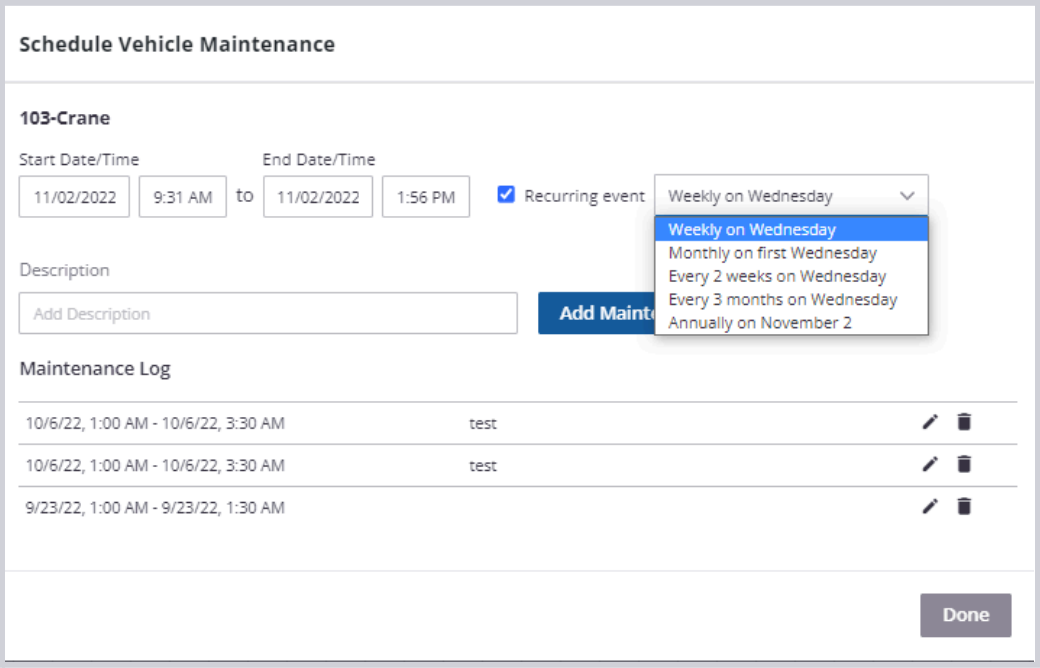
Vehicle Maintenance

The Schedule Vehicle Maintenance pop-up box works much like the driver PTO block.

To create an asset maintenance period, drag at the start of the reservation time. This will create a time block on the calendar, highlighted in blue. Right-click the blue block and click Scheduled Maintenance.

The *Schedule Vehicle Maintenance* window allows you to create, edit, and delete vehicle maintenance periods. You can also see the previously scheduled maintenance periods for the asset.

There is also a maintenance log for a vehicle's past and future maintenance blocks. Using this screen, you can set up recurring maintenance schedules. The example below was created on a Wednesday, which lets you set up a recurring schedule for that day.

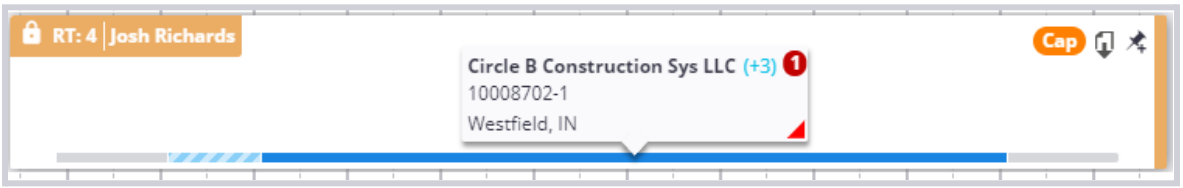


To edit maintenance periods, right-click the maintenance block and click Edit. To delete a PTO period, right-click the maintenance block and click Delete.

The Route Card

The Route Card is located on the calendar and will appear once you create a route. The header of the card will match the color of its corresponding route on the map. Hovering over the header will display a pop-up that will quickly provide more information about the route.

The stops are represented by the dark blue line on the bottom of the Route Card and stop information is displayed on the stop card above that line.



Lock/Unlock Icon

The lock/unlock icon is located on the header of the Route Card. Its purpose is to inform you if Resource Calendar is still algorithmically setting the most optimal start time for the route or if you have manually rescheduled the

route start time. This is especially useful when you do not plan your routes at once and need to know which routes you have modified.

Locked Route — Overrides Resource Calendars algorithm and adheres to the chosen start time set by you rather than attempting to “move” the route to its optimal position.

- A route is locked if:
  - It has been manually rescheduled by dragging the route to another start time on the Route Calendar.
  - It has been moved to another resource (Vehicle or Driver) on the Route Calendar.2
  - You select the lock icon to manually lock the route.

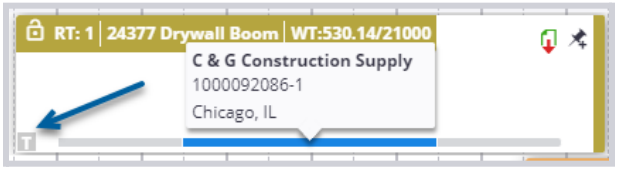
Unlocked Route — Indicates Resource Calendars algorithm is still optimizing the route start time and that you have not manually changed the route start time.

- A route is unlocked if:
  - It is created by dragging an Unloaded Order onto the Route Calendar.
  - It was created via the Lasso tool.
  - You select the lock icon to manually unlock the route.

You cannot Optimize or Reschedule a route if it is locked

Route is Logged In/Logged Out

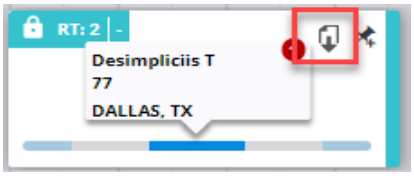
There are three statuses of a route, Preassigned, Logged In, and Logged out. If a route is logged in then you will see a T icon located on the Route Card before the route line begins. If the route is logged out, the icon will change to light gray (as seen in the screenshot). If the route has never been logged in or logged out, then that means it is Pre-assigned and there will be no icon shown.



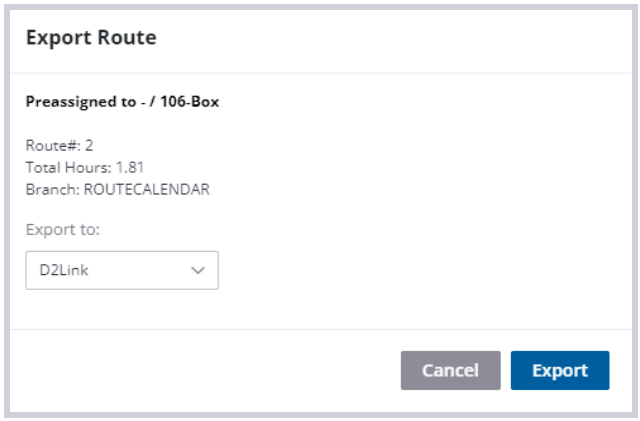
If a route is logged in or logged out you will not be able to edit or unload the route.

Exporting a Route

Resource Calendar allows you to export a route to your integrated telematics/mobile provider. The integrations for these driver apps or OBCs are into DRTrack, but Resource Calendar can be used to export the route to the device. To export a route, click the icon at the top of the Route Card:



Resource Calendar will display a pop-up with pertinent export information like the assigned driver and asset, the route number, and the total hours for the route. Select the format you wish to export to from the dropdown, then click **Export**.



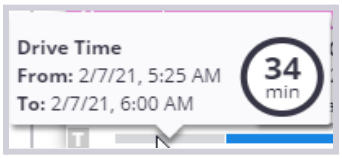
After export, the icon provides the visibility needed to understand what routes have yet to be exported (null), have been exported previously, or need to be re-exported due to changes made to the route.

Pinning a Route

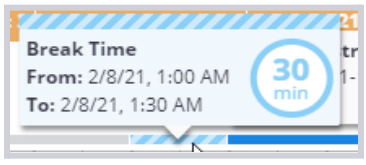
The Route Card's thumbtack icon allows you to pin a route, giving you the ability to focus on single or multiple routes on the Map panel. To unpin a route select the thumbtack icon on the Route Card again or select the thumbtack icon located on the map to unpin all.

Route Line Information

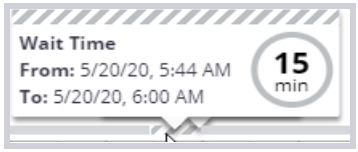
Hovering over the route lines on the Route Card provides additional information about the route:



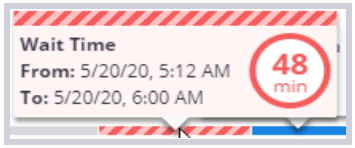
Solid gray line indicates “Drive Time”



Blue slant line indicates “Break Time”



Gray slant line indicates a short “Wait Time”



Red slant line indicates a long “Wait Time”

Other Route Options

Right-clicking on the Route Card provides more options to interact with the route.

NOTE: Some of these items may not be shown due to User Permissions.

Unload Route

Unload Route will remove the route from the Route Calendar and place all of the orders on the route into the Unloaded Orders panel. This action can be undone.

Optimize Route

The Optimize Route option is useful for quickly optimizing a single route. If a route is unlocked, does not have violations and there are cost savings to be gained if optimized, Resource Calendar will optimize the route by resequencing the stops and/or altering the start time of the route.

Edit Route

The Edit Route pop-up will allow you to change a route’s start date and start time along with the Assigned Vehicle and Driver.

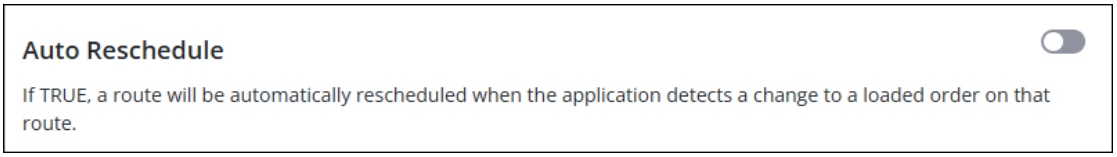
Reschedule Route

If updates have been made to an order on a route, the route may not be in its optimal configuration. Reschedule Route recalculates the statistics of the route, including start time, drive time, wait time, departure and arrival times, end time, and volume. If necessary, the route will be modified to its most efficient routing configuration when the recalculation is complete.

If a violation(s) will occur by the recalculation, Resource Calendar will alert you of the violation(s) and allow you to continue or cancel with the reschedule.

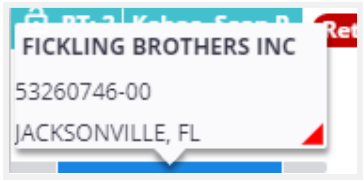
Auto Reschedule Routes

You can also set Daily Planner to automatically reschedule a route when it detects a change to a loaded order on that route. This setting is available under **Preferences** > **Behaviors**. Scroll to the bottom of the page and click the switch to turn on auto rescheduling.



Mark Route Clean

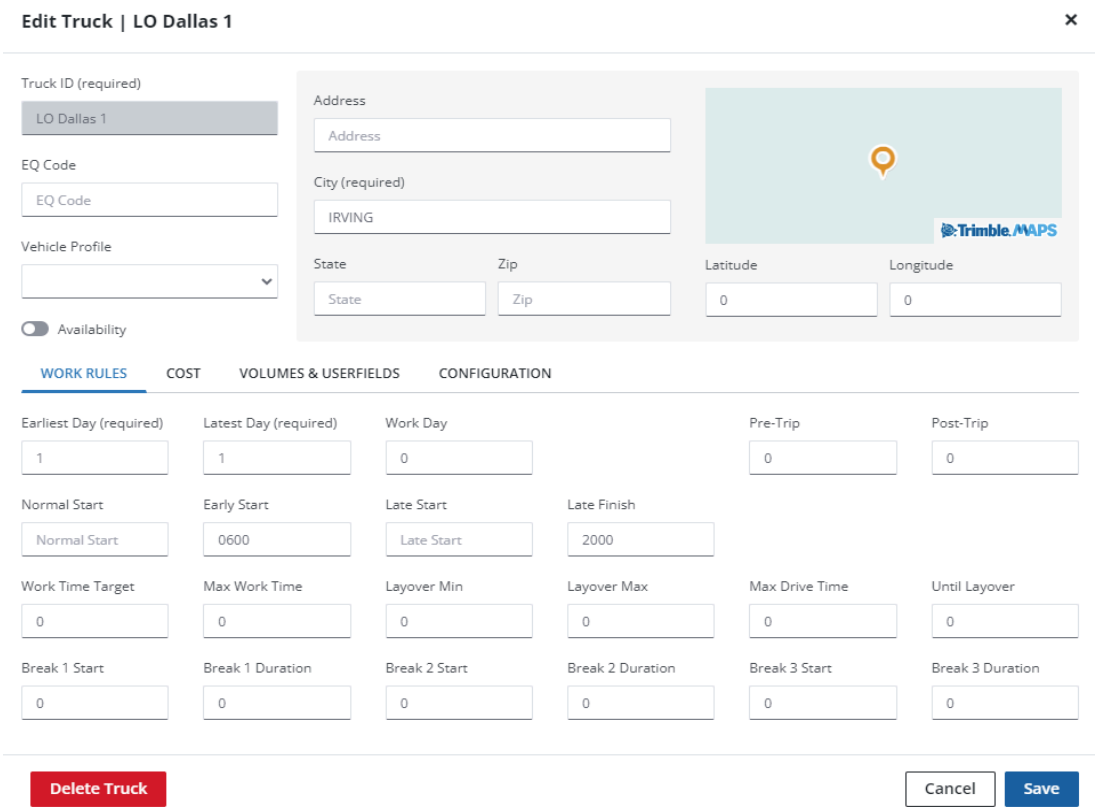
When an update occurs on one or more loaded orders on a single route, resulting in those orders being marked as “dirty”, a red flag will be displayed at the bottom corner of each order. Mark Route Clean allows you to simultaneously mark all of the orders on a single route “clean” indicating the changes have been reviewed and the route is fine to proceed.



Alternatively, if you want to mark a single order clean you can do so by clicking the orders’ Stop Card and clicking **Mark Order Clean**.

Viewing and Editing Truck Info

To view the details of a truck record, click the record. This displays the ***Edit Truck*** window:



Changes here only impact the daily copy of the truck and not the truck master record.

View Route Details

View Route Details options will direct you to the DRTrack pages.

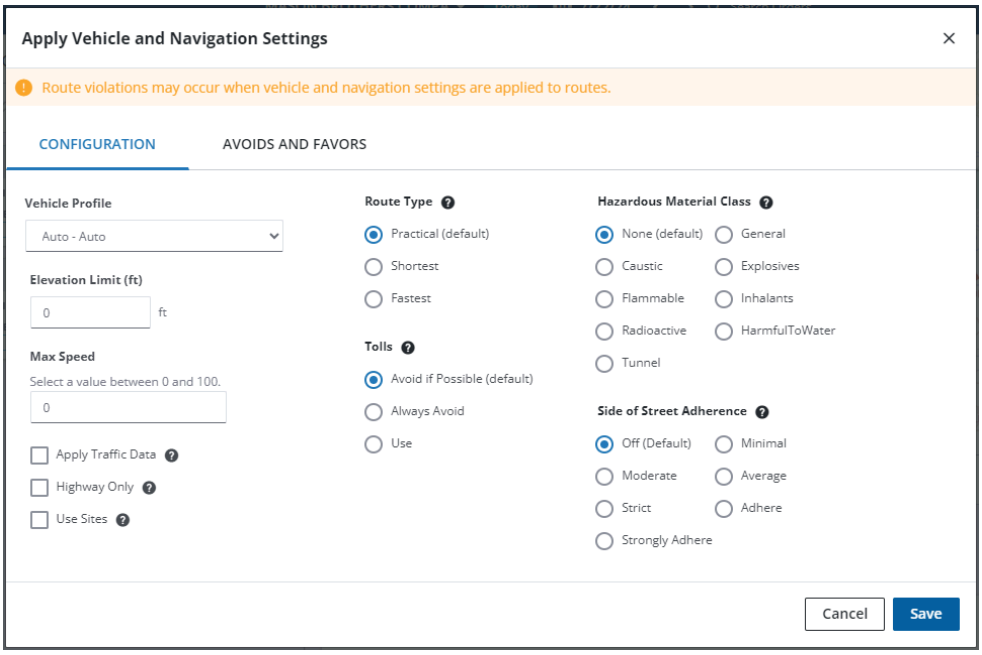
Vehicle and Nav Settings

Apply a variety of settings to customize and enhance multiple Routes in the Branch at one time (e.g., routing based on loads and road preferences). Any option selected in this window overrides the Default settings made in Preferences.

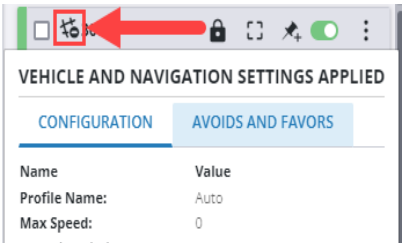
- This action is only visible with an active PC*Miler Web Services (PCMWS) license.
  - Using PCMWS provides the most accurate ETAs calculated in CoPilot.
  - Because these modifiers are applied post-routing, there is a chance that updated drive times and distances could cause violations on the Routes.
- Vehicle & Nav Settings remain regardless of any action taken to modify the Routes.
  - If the Routes were deleted and rebuilt they are treated as a new Route even if they have the same Route name.
- Routes with settings applied should cache the options selected.

Available Configurations

- **Configuration Tab** —Vehicle and Navigation settings (e.g., avoid tolls, fastest vs shortest Route).
  - **Vehicle Profile** — The backup profile used if an invalid profile is detected while applying vehicle settings.
    - Vehicle type, dimensions, and load influences how Routes are calculated while being legally compliant.
    - Configure in the Account Manager. For more information, click here.
  - **Elevation limit** — (N. America only) Sets the elevation limit for the Asset type and load. Default value is null.
    - The entered limit is ignored if it is deemed impractical, or a Stop is located at an elevation higher than the entered limit.
  - **Max Speed** — (N. America only) Sets max speed, in mph or kph, determined by the DistanceUnits parameter.
  - **Apply Traffic Data** — This allows the algorithm to use traffic data and historical traffic patterns and avoid traffic closures while calculating the trip's ETA and travel time.
    - The trip's departure time is set within 15 mins of the current time
    - Real-time traffic data is used for the first 15 miles and historical traffic patterns are used for the remainder.
    - Feature is only used when the *Route Type* is set to *Fastest* with the exception of road closures.
  - **Highway Only** — Enables highway-only routing to generate distances between cities or postal codes.
  - **Use Sites** —(Also known as *Places*) Indicates if the Stops are off site and considers site gates during routing. For a full list of available sites/ places, visit Content Tools.
  - **Route Type** — Calculates your trip based on preference. For additional information, click here.
    - **Practical** — Uses a typical Route. Takes the most direct path and stays on major, high-quality highways to minimize time and cost.
    - **Shortest** — Uses the shortest Route within reason. May be longer than the practical route based on road conditions, speed limits, and other factors.
    - **Fastest** — (N. America only) Uses the fastest Route based on real-time and historical data. Mileage may be more than the practical Route. Not recommended for trucks. Only be used for vans and automobiles.
  - **Tolls** — Pick between Always Avoid or Try to Avoid tolls. This could impact distance, ETAs, etc…
  - **Hazardous Material Class** — For hazardous material types and categories, click here.
  - **Side of Street Adherence** — Use this setting to avoid the destination being on the opposite side of the street.
    - The **Off** setting will not reroute based on the side of the street, while **Strongly Adhere** uses any means necessary to reach the destination on the same side of the street.



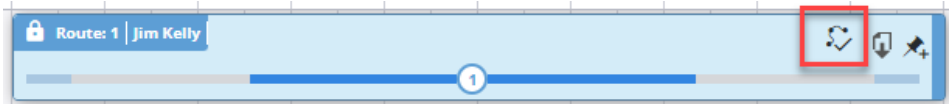
When vehicle and navigation settings are applied, a badge will show on the corresponding route.



You can hover over this badge to see which settings were applied to the Route. The *Configuration* and *Avoids and Favors* tabs directly correspond to the values in the *Apply Vehicle and Navigation Settings* window.

Finalize Route

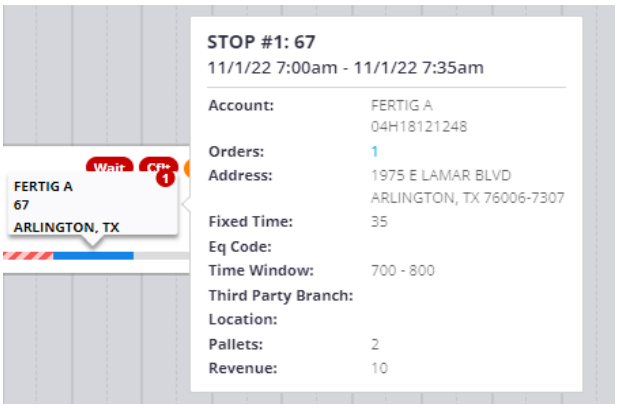
Finalizing routes marks a route as “finished,” and ready to be integrated back into your ERP or TMS system. This allows you to focus on the finalized routes and avoid the ones that are still being planned. Finalizing sets the finalize date and time on the route, allowing for web service calls and the Route Export Service to only return routes that have met this condition. Finalized routes are indicated with a checkmark on the route card:



Finalizing a route also sets the routemodifieddate for the route, another popular method for filtering web services calls to get route information out of Resource Calendar.

The Stop Card

By default, the Account Name, Order ID, and City and State of the Ship to Address are displayed on the Stop Card on a route. Additional information will be shown while hovering over the Stop Card. The last four fields are taken from the Volume and Stop fields selected in Aliases.



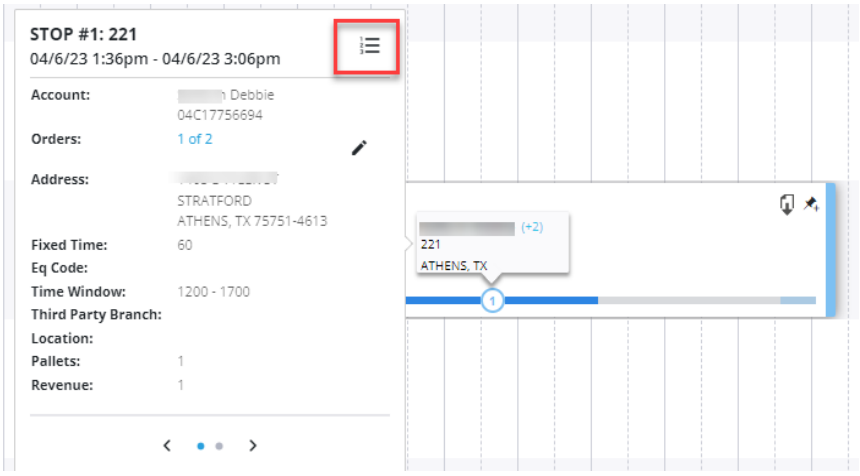
This card is currently not configurable, but to change the volume or user field data displayed, navigate to the preferences menu, then change any of these fields:

- Default Volume Field #1 / Default Volume Field #2
- Default Stop User Field #1 / Default Stop User Field #2

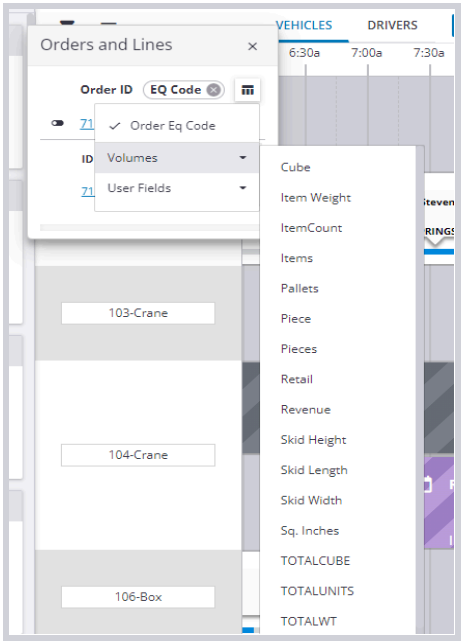
Clicking the stop card will pop up a card with additional actions.

Viewing Order & Line Item Details

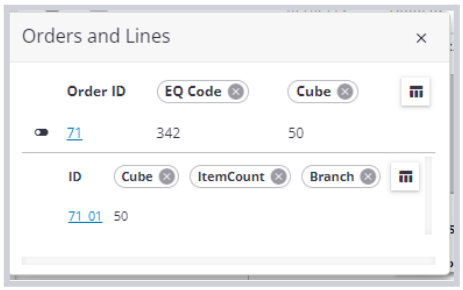
Order and Line Item Details allow you to drill down into the order and its line items to view additional Volume and User Fields. To access the line item view, first, select the stop card on the route. Then select the line item icon.



Once selected, you can pick different data points to view on the order and line item. By selecting this icon, any volume or user fields can be added to the grid for visibility.



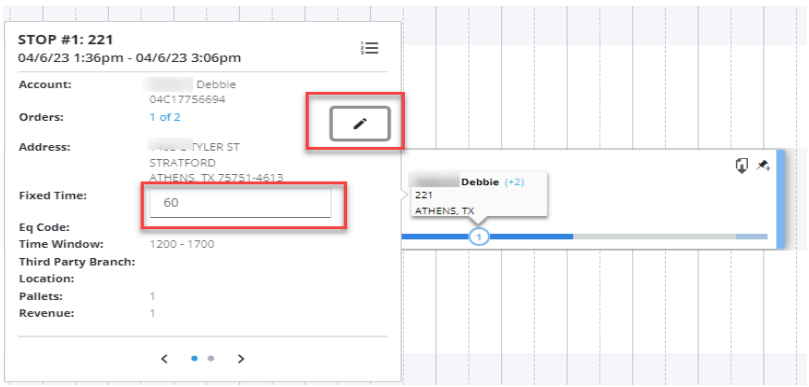
The top section of the card reflects the overall order details; the bottom part will display all line items listed with the individual data points.



This view will persist between sessions.

Editing Fixed Time

By selecting the pencil icon on the stop card popup, you can edit the fixed time for the stop.



Once the fixed time is updated, click the pencil icon to save and the route is updated with the new values.

Additional Stop Card Interactions

Right-click the stop card on the Gantt chart and a new menu will be displayed allowing more functionality with the routed stops.

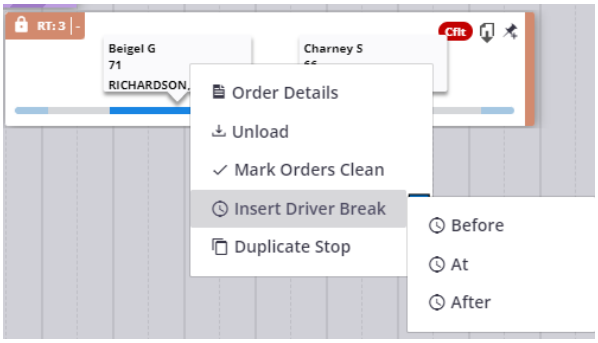
View Order Details — This option will open the order details screen in DRTrack in a new tab. Any order details can be viewed or edited. If you are editing any order information and click Save and Reschedule (in DRTrack), the changes will be reflected in Resource Calendar.

Unload — You can unload a single stop from a route using this option. If the stop is the last stop on the route, the route is also removed from the calendar. You can also unload a stop by grabbing the card on the route and dragging it back to the unloaded order panel.

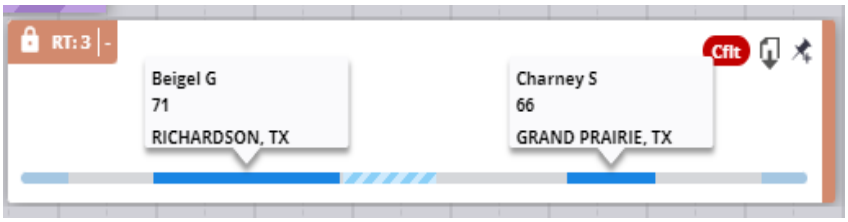
Mark Orders Clean — When an update occurs on an order loaded on a route, the result is that the order is marked as “dirty.” A red flag will be displayed at the bottom corner of each order. Mark Order Clean allows you to mark that order “clean,” indicating the changes have been reviewed and the route is fine to proceed.

Editing Fixed Time — When you click the Stop Card, the hover pop-up will remain fixed in place and a pencil icon will appear. Selecting this icon allows you to edit the stop's fixed time. This feature is also enabled with Consolidated Orders.

Insert Driver Break — You can easily add a driver break from the Route Card. To add a driver break, right-click on a stop card and click **Insert Driver Break**. You will be prompted to select if they want that break before/after that stop or at a particular time that they set.



Once the driver break is created, it will be displayed on the Gantt chart as a blue hashed line. You can hover over this line to see the start and end time of the break, as well as the duration.



Adding a break may change the start time of the route (if not locked), planned arrival times at stops later in the route and could potentially create violations on the route.

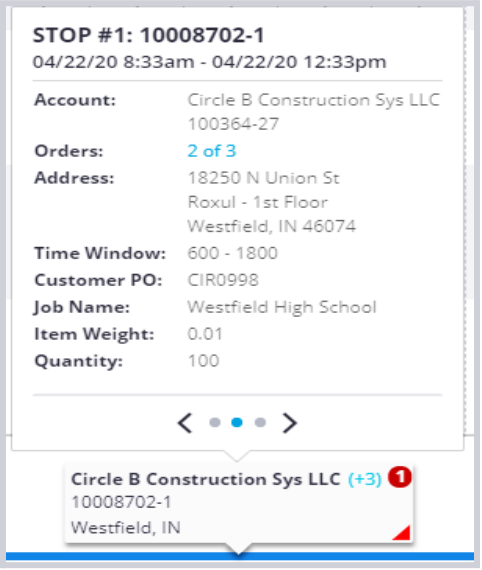
To create the break, the parameters break duration and break start in the truck record associated with the route are updated with values that represent the time selected. You can see this by **right-click > View Truck Info**. The DRTrack truck info will open in a new tab.

If you change the value of break duration, hit save, and reschedule, the break will be updated with the new break time. Only the truck record for this route will be updated and not the truck master.

To delete a break, right-click on the hashed line on the calendar and click **Delete Driver Break**.

Duplicate Stop — This action creates a copy of an order that is already planned on a route. This new duplicate order goes directly to the unloaded order pool.

Order Consolidation — Unloaded Orders containing the same EQ Code, Time Window, and the same Address and/or Account ID, depending on the Configuration Settings enabled, may be consolidated if placed on the same route. Hovering over the consolidated Stop Card provides you with the same data as a single order Stop Card as well as the ability to scroll through each order for the stop. See Consolidation Exception for more information.



Printing Routes

Printing Routes may be useful to Drivers that regularly pass through areas with limited cellular service.

1. Click on *Print* from the More Menu Action list.
2. Select *Print Route Map.*
3. Choose your print settings and click *Print.*

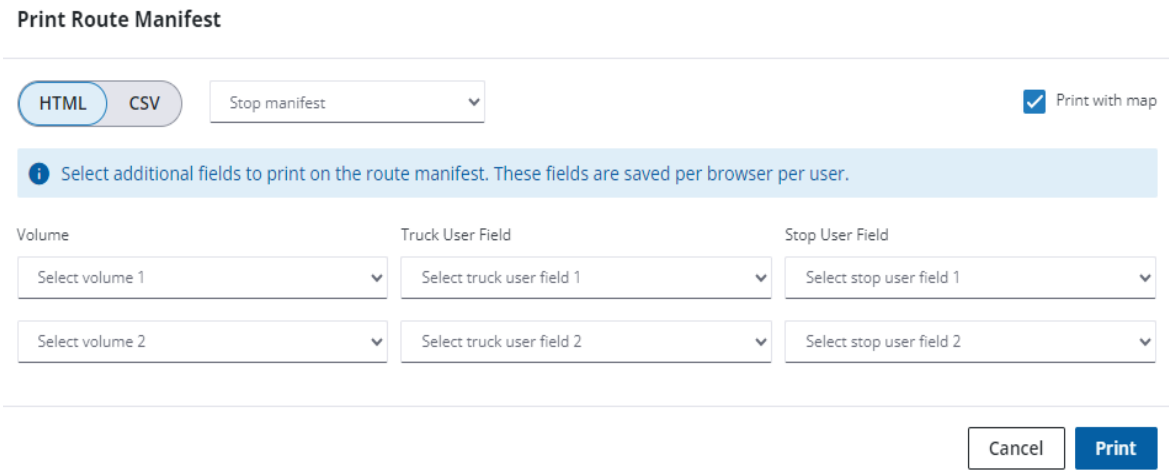
Print a Route Manifest (multi-route)

A Route Manifest is a summary of the Route, its Stops, Orders and other information. It can be printed as an HTML file or CSV (comma-separated values file) file.

- HTML— A line-by-line list of stops in sequential order, including breaks and layovers. It's easiest to read.

- CSV — Opens as a spreadsheet (e.g., Excel) where columns and rows can be filtered, sorted, or hidden. It can also be used as a primary backup method.

1. Toggle the file type you want to print (e.g., CVS).
2. Select the manifest type you wish to print from the dropdown — Stop, Order, or Line item.
3. Check the *Print with map* box if you wish to include the Route map on the last page.
4. Select up to two additional columns from each field drop down to add extra information to the printed manifests.
5. Navigate to the Prescriptive Intelligence section and set the Violations to *Not Important*. If you **do not** want the violation to be displayed. Violations are printed by default.



Managing Routes and Stops

Creating a Route

From the Unloaded Orders Panel — You can create a route by dragging and dropping an unloaded order onto a row of the preferred Vehicle or Driver asset. You can also select several unloaded orders with the Multi-Select Tool to build a route. The route is created with the constraints set on the order, the asset(truck) and the algorithm settings.

From Another Route — If a route is shown on the Route Calendar with multiple stops, you can select a single stop from that route and move it to another available resource (Vehicle or Driver) to create a new route.

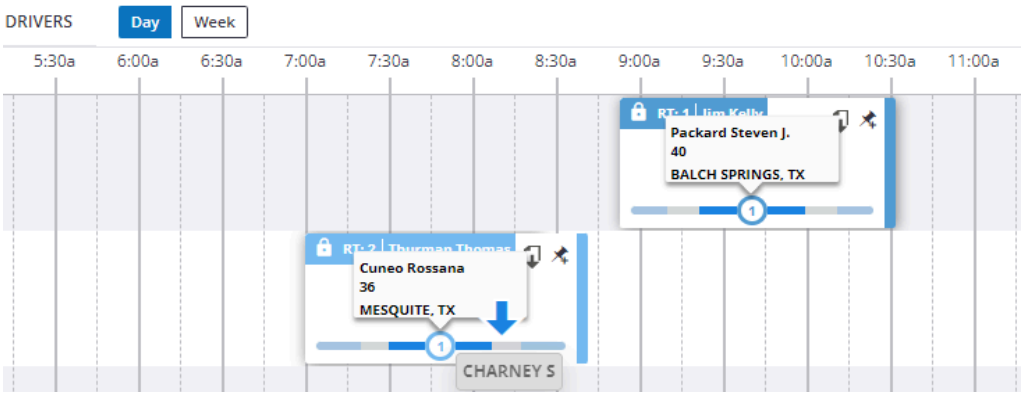
See Lasso Tool for creating a route via the map.

Moving Stops

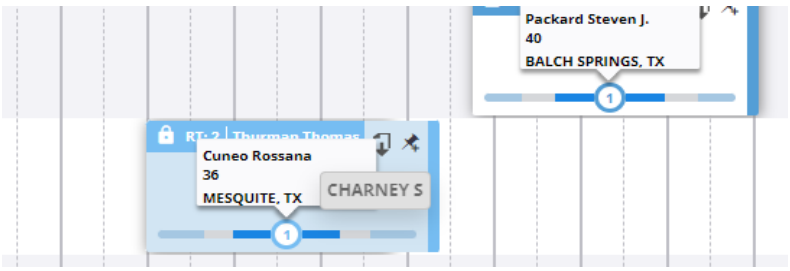
There are a few ways Resource Calendar allows you to move a stop, whether it is loaded or unloaded.

- Between Routes on Calendar — Selecting and dragging a Stop Card from its current route and then positioning it onto the route line of another Route Card will load the stop onto that route and unload it from its original route.

  - If you drop a card onto an existing route, two options will be presented:
    - Moving the card to the bottom of the Route Card will allow you to put the stop in whichever sequence they choose. The position will be indicated by an arrow.



    - If you move the card to the top of the Route Card, the algorithm will determine the best sequence for the order. You will know when they are in the new drop area when the entire Route Card becomes highlighted.
      - The algorithm will consider all rules of route construction including time windows, maximum work time, as well as all information from the order including drive time and distance and service time to make the correct decision.



- Manually Resequence Stops on Calendar — Selecting a Stop Card to move it before or after another Stop Card offers a fast way to resequence the stops.
- Unloaded Orders Panel — Selecting an unloaded order and dragging it onto a route will create a new Stop Card on the route.
- Unloading a Loaded Order. Selecting a routed order on the Route Card and dragging it back to the unloaded orders panel will remove the stop from the route. If this is the last order on a route, the route will be deleted.

If violation(s) occur because of moving a stop, Resource Calendar will notify you of what violation(s) will be created due to the change and will allow you to either Cancel or Continue with the move.

Truck Record vs Truck Master Record

When a route is created on an asset or a driver tied to an asset via the userfield, the system understands which truck master record is to be used to “build” the route. Instead of building the route on the truck master, a copy of that master is created as a truck record. This truck record can have its attributes edited, but those changes will not update the truck master record.

Moving Routes

It is very quick and easy to move routes on the Route Calendar. Drag the route onto a new resource or a new start time. The action can also be done with all of the Scheduled Time Blocks.

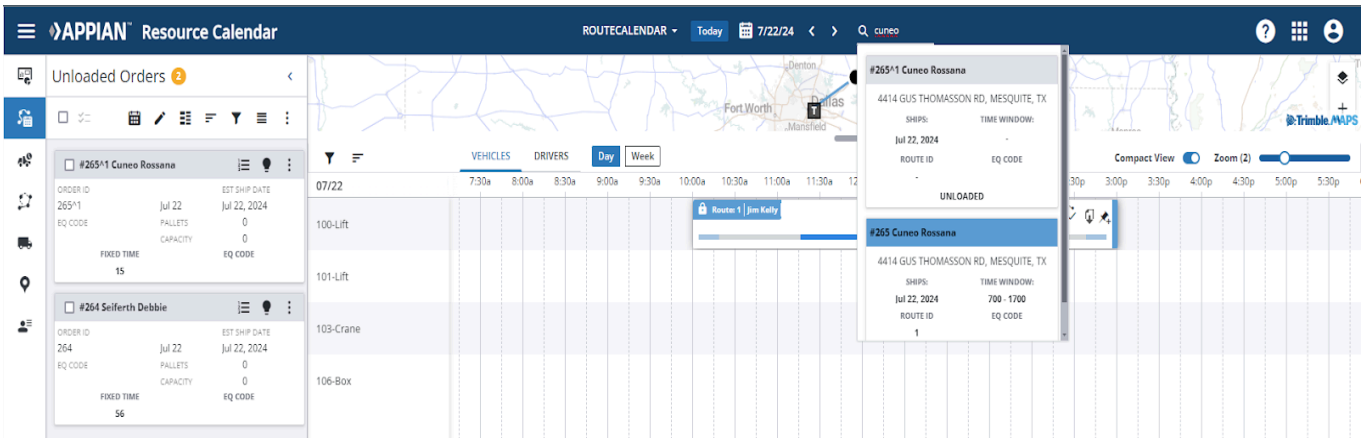
If violation(s) or conflict(s) occur because of moving a route or time block, Resource Calendar will notify you of what violation(s)/conflict(s) will be created due to the change and will allow you to either Cancel or Continue with the move.

Master Order Search

The search bar at the top right of Resource Calendar is the Master Order Search tool. This tool is meant to help you quickly find orders, loaded and unloaded, that are within the branch you are viewing. The criteria you can put into the search to look for orders can be one of the following:

- Order’s address or city it is being shipped to
- An account that an order is under
    - Account ID
    - Account Name
    - Account address
    - Account city

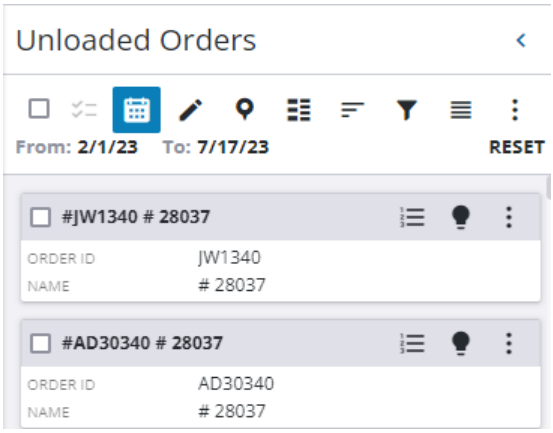
Once you enter at least three values or more, Resource Calendar will begin querying for order results. If an order is unloaded you will know by the gray header and if an order is loaded onto a route the header will reflect the color of the route it is on. The information shown for each order on the screenshot below is hard coded and not configurable.



You can drag any order, loaded or unloaded, right from the search results onto the calendar to create a route, or add it to an already created route. Also, by clicking on the header of the card, you can see the order's details page in DRTrack in a new tab.

Importing Orders into Resource Calendar

Order integration methods include upload from DirectRoute, Order Import Service (OIS), or Webservice integration. These methods will not be covered here. Orders sent to DRTrack will automatically be visible and plannable in Resource Calendar. No additional work is required to bring order data into Resource Calendar.

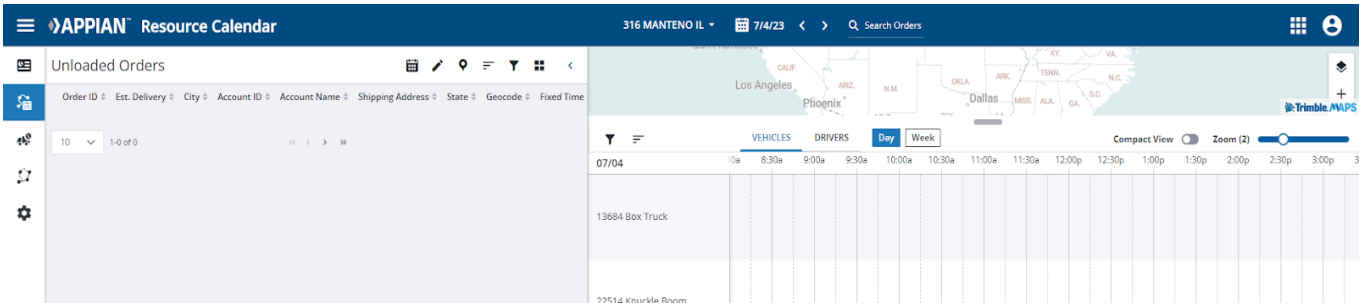


Unloaded Orders Panel

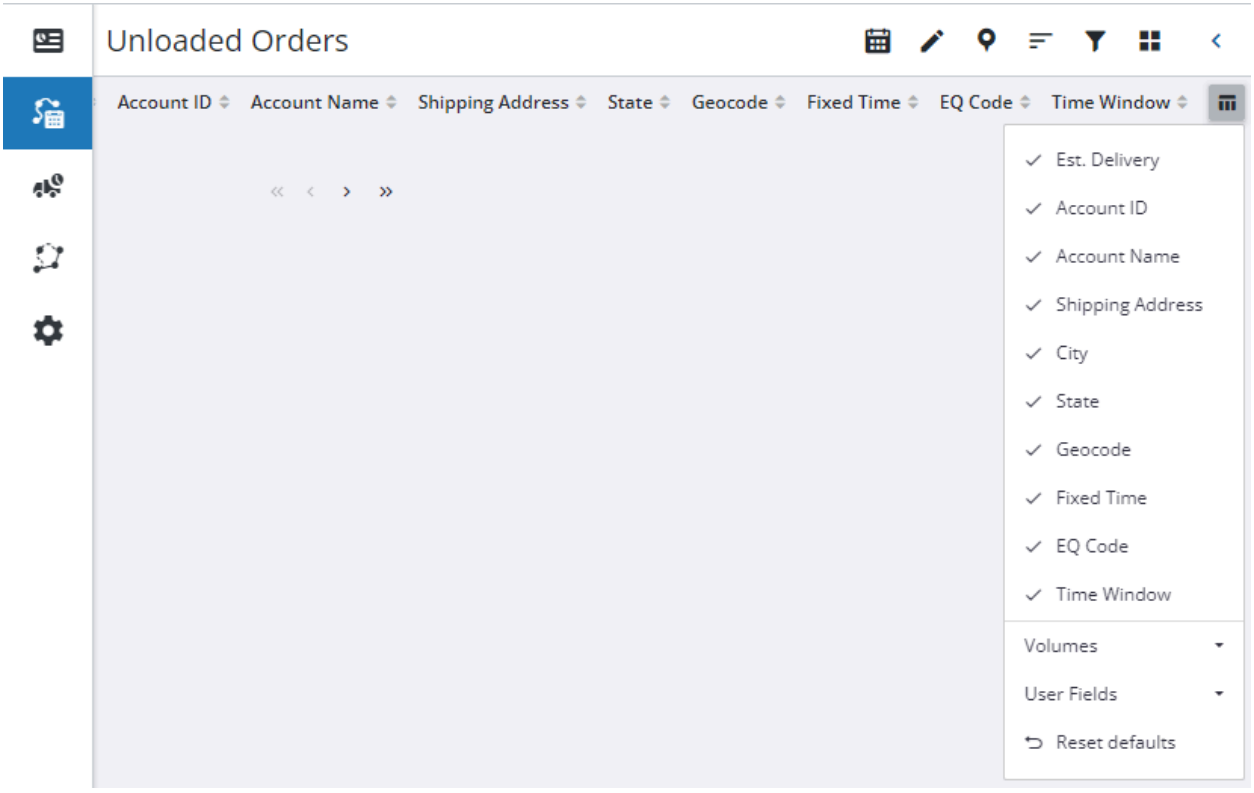
All unloaded orders that are available for the selected branch and the Route Calendar date and/or Unloaded Orders date range you select will be displayed in the Unloaded Orders panel.

Card View or Grid View

Unloaded orders can be viewed as cards (by default) or in a data grid. To toggle between them, click the Hamburger icon. Once clicked, the grid opens up into a two-pane width; this is not resizable. All of the icons at the top of the unloaded order panel work the same way as if cards were selected.



Scrolling to the right of the grid will show a configuration icon, allowing you to configure the columns displayed. Aside from the default columns, any number of user fields or volume types can be added. The configured data is retained between sessions.



The column will not resize based on the number of columns selected, you will need to scroll left and right to view all the details. The list is automatically paginated, but you can configure the number of records they'd like to see before having to go to the next page. To rearrange the columns, drag the header left or right to the desired location. These column orders will be retained between sessions. Selecting a column header will automatically sort the data ascending and descending using the data in the column. The entire grid can also be sorted using the icon at the top of the panel. Just like with cards, the rows in the grid for each order can be dragged onto routes to create new routes or add to existing routes. To view the line items in an order, simply select the arrow next to the order and it will expand showing each line item associated.

Date Picker

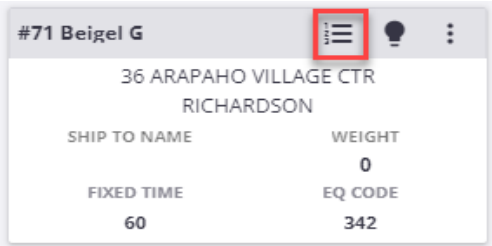
You can choose to see unloaded orders not only for the dispatch date (selected by the date picker at the top of the application) but also for orders in the past and in the future. By selecting the date picker at the top of the unloaded orders panel, you can move the from and to date to whatever they want and the orders for that entire date range will be displayed. This date picker defaults the earliest and latest date to the dispatch date at the top of the application.

Unloaded Order Card

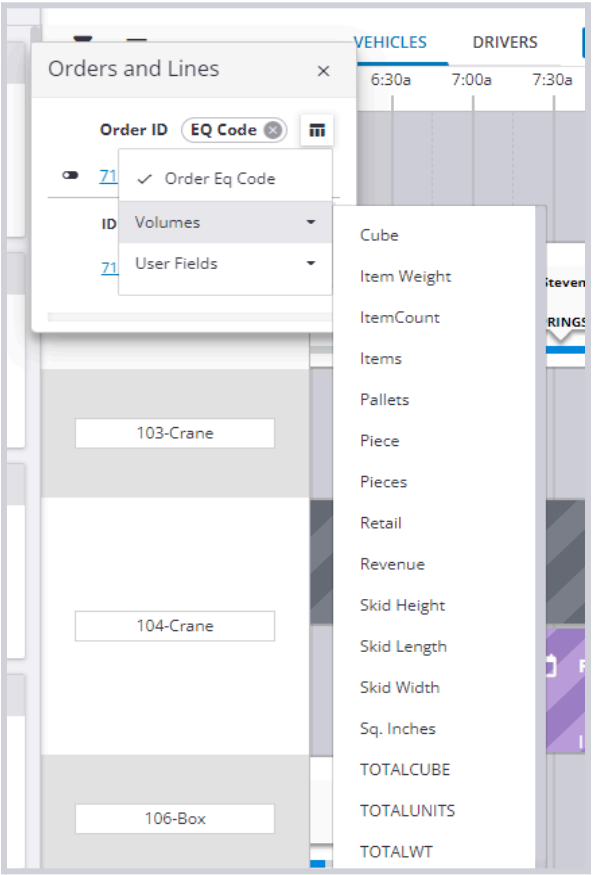
The Unloaded Order Card header displays the orders' Account ID, Account Names, Order & Line Item Details, Suggest Routes, and Additional Options.

Order and Line Item Details

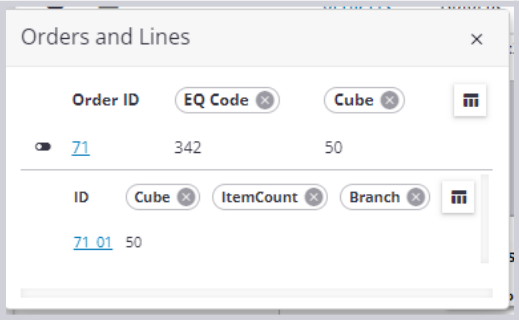
Order and Line Item Details allow you to drill down into the order and its line items to view additional Volume and User Fields. To access the line item view, select the line item icon.



Once selected, you can pick different data points to view on the order and line item. By selecting this icon, any volume or user fields can be added to the grid for visibility.



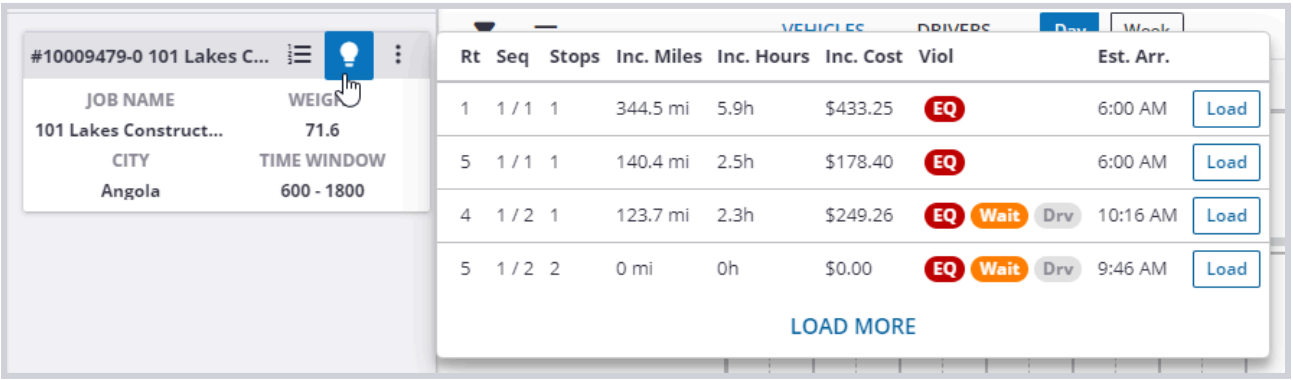
The top section of the card reflects the overall order details; the bottom part will display all line items listed with the individual data points.



This view will persist during a single session but will revert to the default after logoff.

Suggest Routes

Suggest Routes uses Resource Calendar's algorithm to determine the best route(s) to load the selected unloaded order(s). If a route has already been started, Suggest Routes will take into account the completed stops to decide if it is possible to include the unloaded order. Once the Suggest Routes lightbulb icon has been selected, the icon will remain highlighted in blue to indicate that it has already been reviewed. The ***Load More*** option expands the panel to show more route suggestions. This feature is also enabled on the unloaded orders card located on the map.



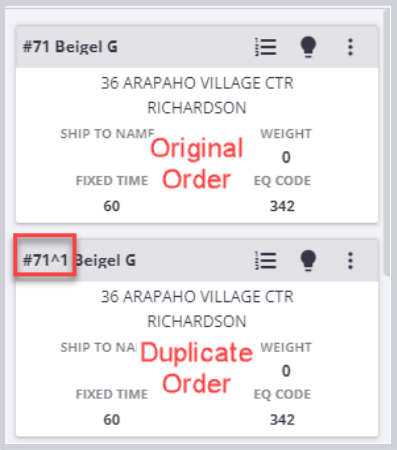
Additional Menu Options for Unloaded Order Cards

By clicking the Kebab on the unloaded order card, you will be able to geocode that single order, view the Order Details, or Duplicate the order.

Duplicate Order

When you select the duplicate order option, whether on the the more menu (three dots) on an unloaded order card or via the right-click menu on the stop card on the calendar, a duplicate of that order will appear in the

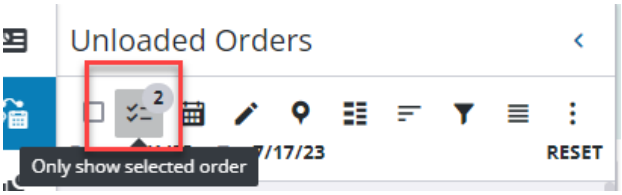
unloaded order panel. Because the order number must be unique, the new order number will be the same as the original concatenated with a ^ and a numeric value representing the count of duplicates of that order.



Other Unloaded Order Functions

Multi-Select Unloaded Orders

To select multiple unloaded orders, check the box next to the order card or line (in grid view). As you select orders, the count of selected orders on the icon at the top of the unloaded orders panel increases. You can view unloaded orders only with the ***Only Show Selected Order*** icon.



Geocode Multiple Orders

Resource Calendar will notify you if an unloaded order needs to be geocoded by highlighting the unloaded order(s) in yellow. To geocode multiple unloaded orders, you select the orders you wish to geocode and then right-click inside the Unloaded Orders panel and click Geocode All. Alternatively, you can select the order you wish to geocode and select the more menu (three dots) at the top right of the unloaded order pane, and click **Geocode All**.

Modifying Information

Selecting the Pencil Icon enables edit mode. Once edit mode is enabled, you will notice that two fields will open up to be editable. These fields are Fixed Time and EQ Code. These fields were chosen to be edited directly in the UI as they are the most frequently updated before planning.

To update the fixed time, which is the time you expect a driver to spend at a particular stop to unload an order, select the fixed time box on the unloaded order card and type in the new value. This will not be saved until you select the pencil multi-select icon again. There is data validation in place to ensure only numeric values are typed in.

To update the EQCode field, select the EQCode box on the unloaded order card and type in the new value. This will not be saved until you select the pencil multi-select icon again.

You can quickly enter multiple order values for each field by using the Tab key which will move you from field to field on each card.

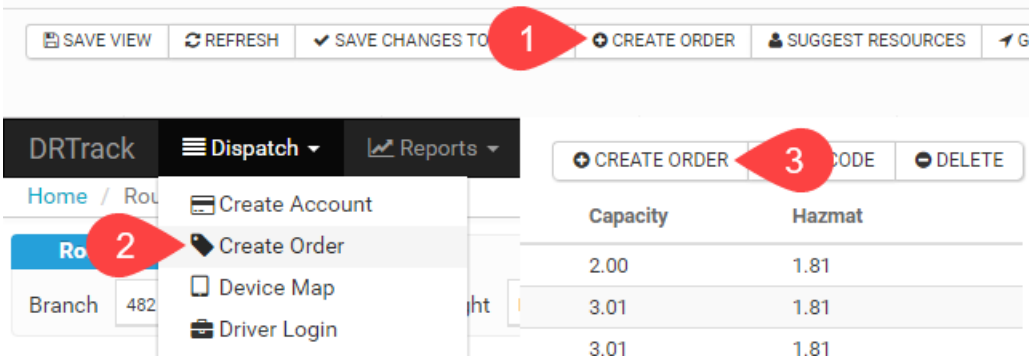
To change other order details, click the more menu (three dots) on the unloaded order card, and select Order Details. The order details menu in DRTrack will open in a new tab.

TIP: You can also use Ctrl+Shift OR Ctrl+Click to select your orders.

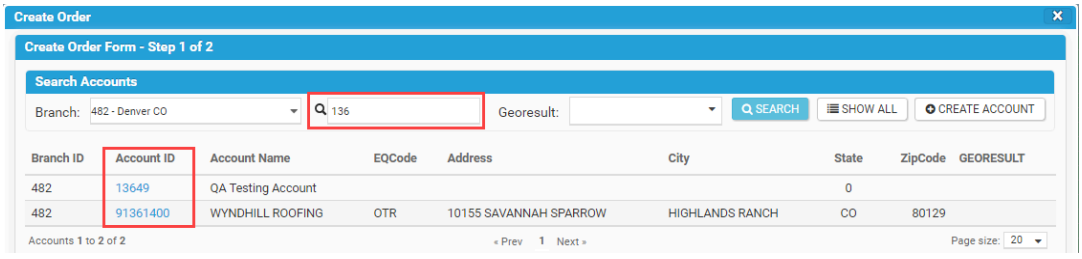
Creating New Unloaded Orders

Currently, there is no way to create a new order in Appian Resource Calendar. To do this, navigate back to DRTrack and follow this process.

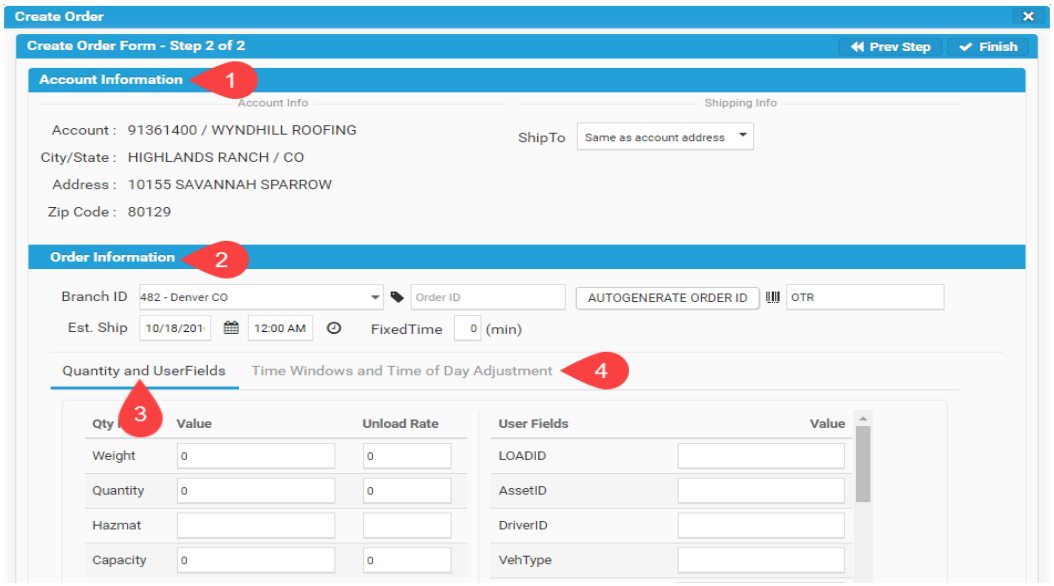
There are three places to create a new order. You can create them directly from the Route Calendar (1), the Dispatch menu (2), and the Unloaded Orders screen (3). The steps below will illustrate the process from the Route Calendar, however, the steps are the same for the other methods of creating an order.



Search for the Account ID that belongs to the order you wish to create (NOTE: If the account does not exist, you will need to first create the account. Click on the blue hyperlinked Account ID.

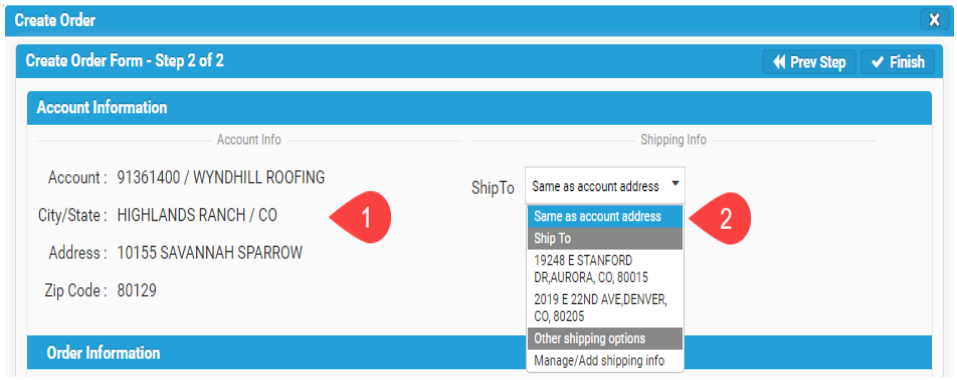


The “Create Order Form” has multiple sections with required information to be filled out.

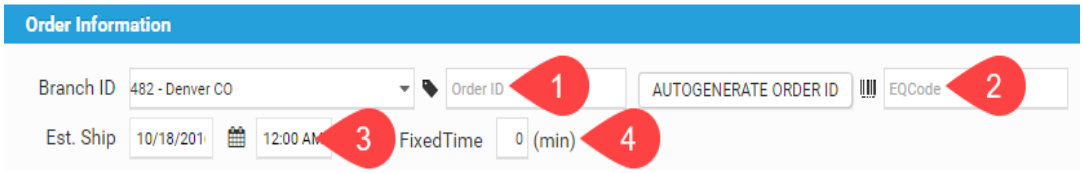


1. Account Information
2. Order Information
3. Quantity and User Fields
4. Time Windows

Account Information:



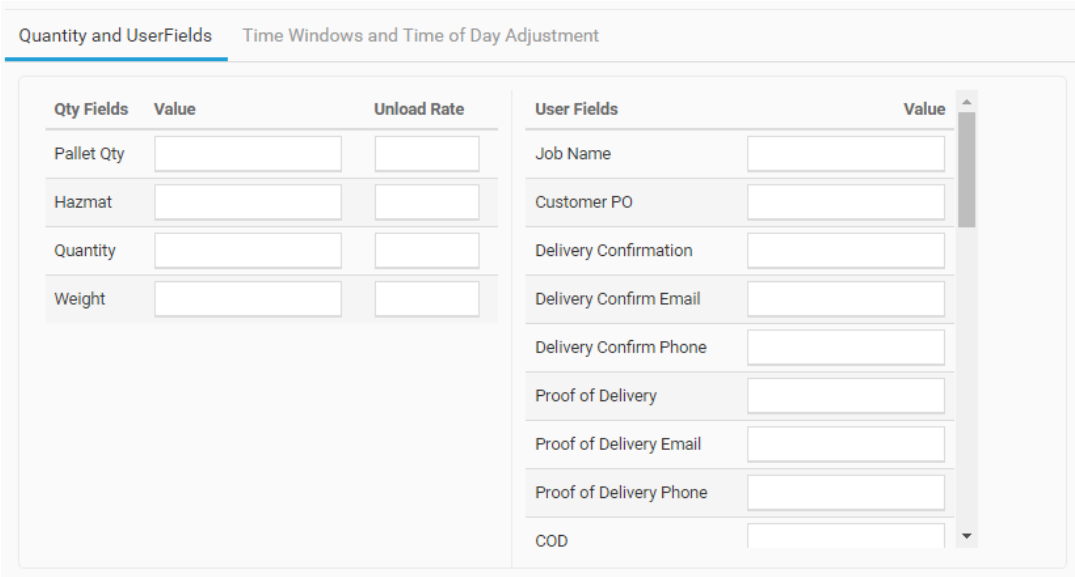
1. Confirm the Account Number. To change the Ship-to Address, select an address from the drop-down menu (2). By default, the Ship-to Address will be set to “Same as Account Address”.
2. Order Information. The following are required



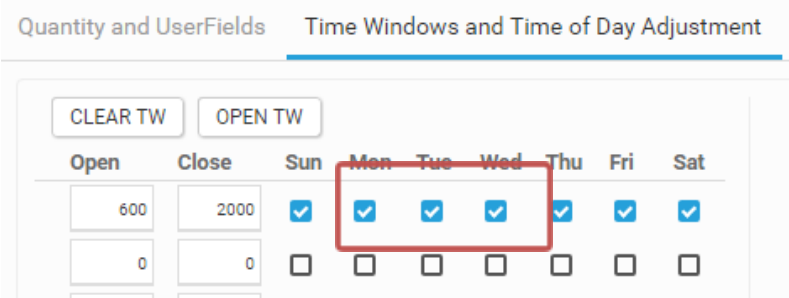
1. Order ID. This must be a unique number. Most likely is going to be the Ticket Number
2. EQCode. This is the Delivery Type.

3. Est. Ship. This is the date the Order is expected to ship. This date is where the Unloaded Order can be found after completed
4. Fixed Time. This is the total service time at a stop. From Arrival to Departure

Quantity and User Fields: These are the minimum required fields.



Time Windows: Format for time should be in 24h time (eg. 11:00pm should be entered as 2300).



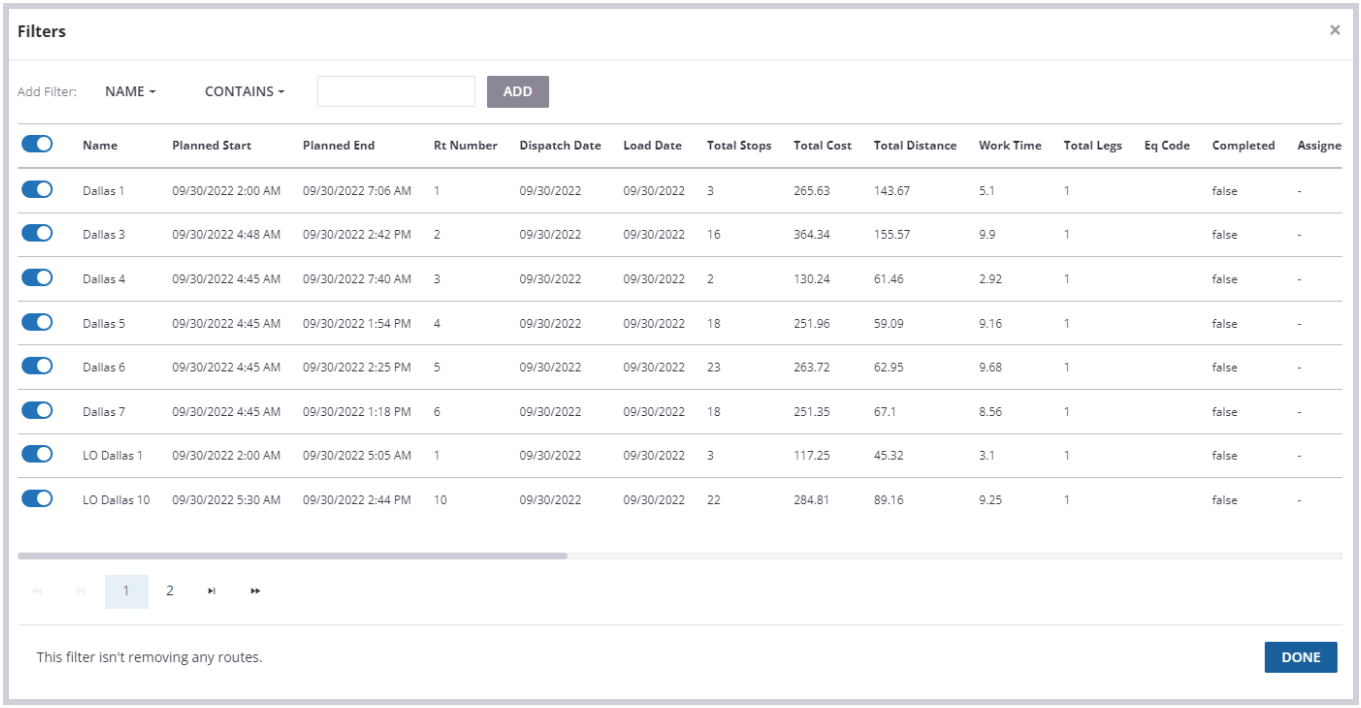
1. **Open**: The Earliest time in the day that a delivery can take place
2. **Close**: The Latest time in the day that a delivery can take place

When you are done, click **Finish**.

Filtering Unloaded Orders

Resource Calendar offers a robust filtering experience that allows users to create expression-based filters that ensure it is showing orders that match the criteria that the dispatcher chooses.

When you click the filter icon, you are presented with a list of all of the orders on that dispatch date as well as many of the common order elements. You can create filters manually by using the toggles on the left. Turning those toggles off means the routes are unfiltered; if the toggle is blue, the route is inside the filter.



Rather than a manual filter, you can also have the system apply a filter based on meeting specific criteria. Filtering can be done on any of these fields:

Name

- Order ID - Numeric
- Est Ship Date- Date
- Name - Alphanumeric
- ID - Alphanumeric
- Address - Alphanumeric
- City - Alpha
- State - Alpha
- Zip - Numeric
- EQCode - Alphanumeric
- Fixed Time - Numeric
- Volumes - Numeric
- Stop User Fields - Alphanumeric

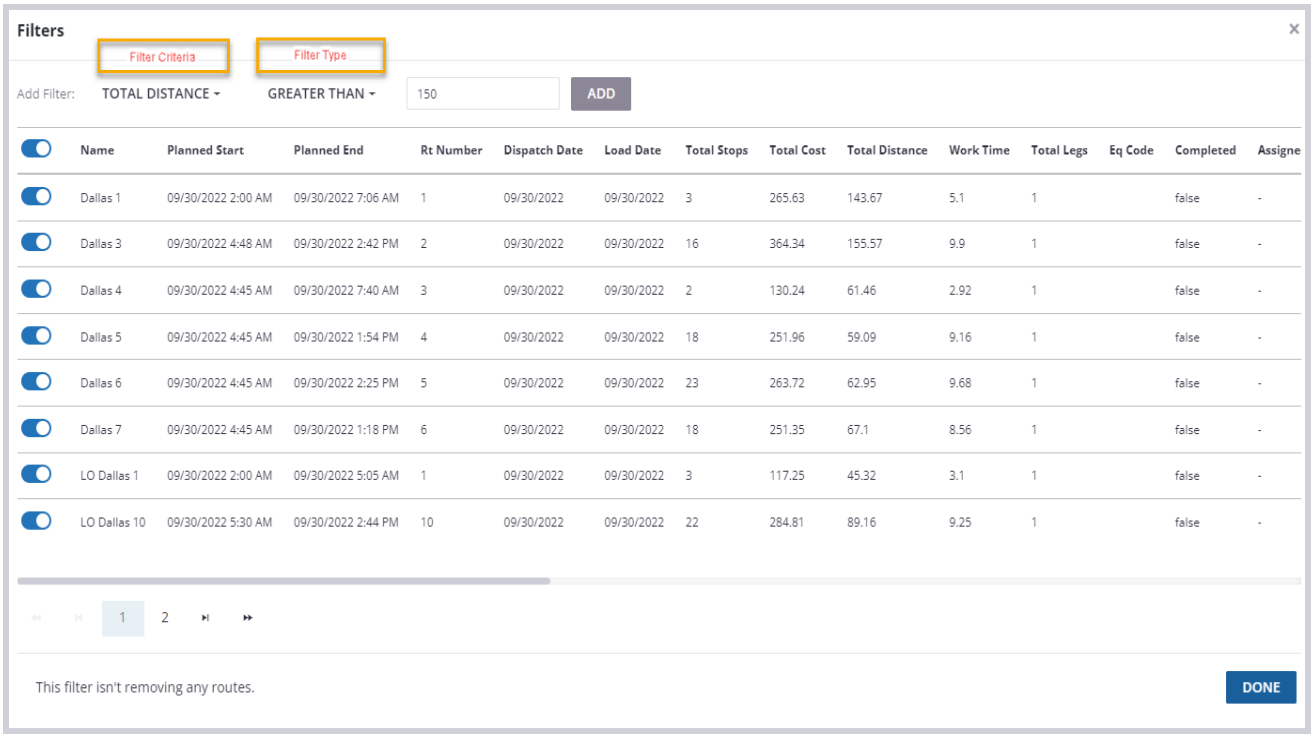
If the value of the field is alpha, then the filter types can be:

- Contains
- Does Not Contain
- Starts With
- Ends With
- Is Empty
- Is Not Empty

If the value of the field is numeric, time, or date based, then the filter types can be:

- Equal To
- Not Equal To
- Is Null
- Is Not Null
- Less Than
- Less Than or Equal To
- Greater Than
- Greater Than or Equal To

For example, if a user wants to see only orders that were over > 45 minutes of fixed time, they would select the Filter Icon, then select filter by Fixed Time, then select Greater Than and type in 45 and hit add.



Once this is done, you will see the filter applied and can add other filters to drill down the list further if necessary.

Sorting Unloaded Orders

You can sort unloaded orders for the selected date range and branch on the Unloaded Orders panel. The sorting criteria will persist between sessions until you log out of Resource Calendar, change the sorting criteria, or click Reset to Default in the sorting dropdown. When a user selects the sort icon, they see how the route list is currently sorted by looking for the icon next to the field. If the arrow is pointing up, the route list is sorted ascending; if it's pointed down, it's sorted descending. Clicking the sort on a single field twice changes the direction of the sort.

The sort criteria include:

- Route Name
- Planned Start Time
- Planned End Time
- Rt Number
- Load Date
- Total Stops
- Total Cost
- Total Distance
- Work Time
- Total Legs
- EQCode
- Violations
- Dispatch Date
- Completed Status
- Truck ID
- Volume Fields
- Truck User Fields

You can minimize and maximize the Unloaded Orders panel by selecting the caret.

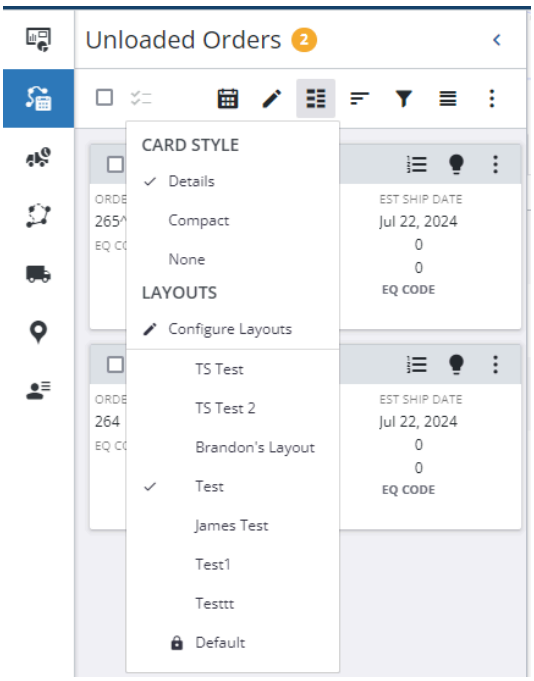
Card Layout Editor

Resource Calendar provides the ability to change the information on the route, stop, and unloaded order cards. Each user can create and save different card configurations (layouts) and easily switch between them. In addition, you can copy and modify any saved layout, or build a new one from scratch.

By default, Resource Calendar comes with three different styles of cards. Each style has a different amount of default information. Each user can create different layouts which contain specific information for that user. These layouts can be displayed with each of the Resource Calendar styles.

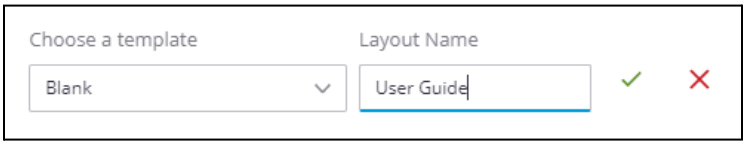
To switch between layouts, click the layout icon and choose your desired style and layout. You can configure new layouts for:

- Route Cards
- Loaded and Unloaded Stop Cards
- Loaded and Unloaded Stop Map Pins



Card Styles and Layouts

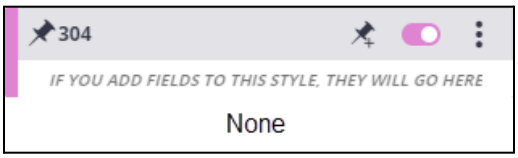
To create a new layout from an existing one, click **Layout > Layout Editor > New Layout**. At the bottom of the screen, select an existing layout template (if desired), give it a new name, and then click the green checkbox to confirm.

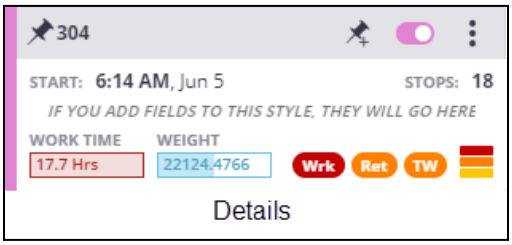


Create a New Layout

After you have created the new layout, you can edit the types of information that appear on the card by using the configurator. Depending on which style you are viewing, the information that you add will appear in different locations on the card.

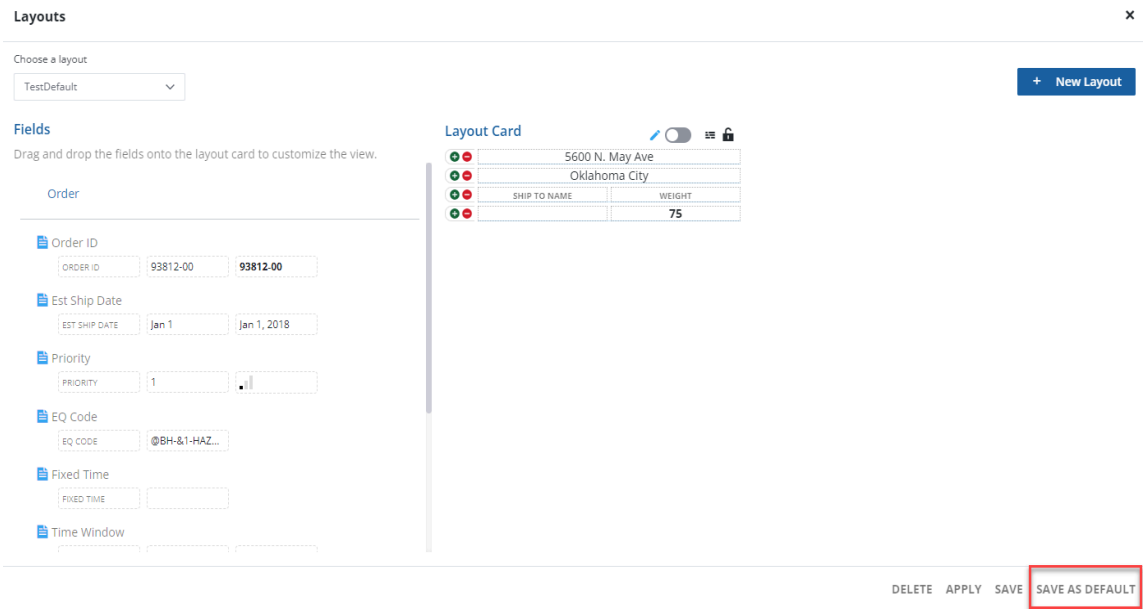
- Add or remove rows on the card by using the plus and minus icons.
- Add or remove information fields by dragging them on or off the cards.
- Format font style and size (where applicable).
- Edit text labels (where applicable).



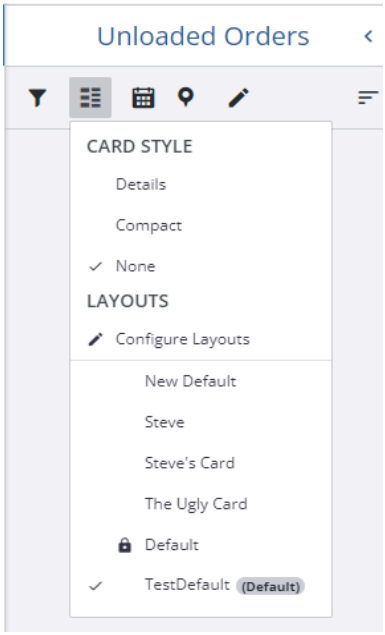


Creating a Default Card

Administrative users can save cards as default cards for the entire organization. After creating a card design; you can click **Save as Default**, which sets them as the default style for all Resource Calendar users.



This default card will appear in the card selection dropdown with a label indicating it's also a default.



Dispatch

The Dispatch page allows users (one user per branch per session) to assign Drivers, Devices, and Assets to the Routes being created. It also has notification options and an export feature for Route tracking and operational visibility. The Dashboard appears when at least one Route is dispatched before logging into Resource Calendar.

Assignment Table

The Assignment table is a customizable and expandable data grid with a Toolbar for various actions and information about each Route. It includes the export status, planned and actual start times, assigned resources, and any scheduling conflict.

The table is customized two different ways:

- Click on the header of each column and drag it to the desired order on the table.
- Scroll to the right of the table and click on the Configuration button to add or delete columns to/ from the table view.

Assign Drivers, Devices, & Assets

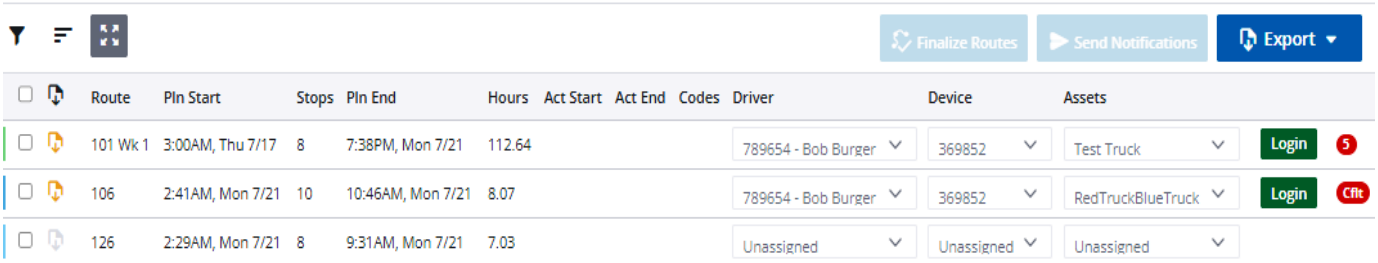
The table allows users to pre-assign Drivers, Devices and /or Assets to Routes. To preassign a Route:

1. Select the Route that needs to be pre-assigned.

2. Select the appropriate Driver, Device, or Asset from each dropdown, and the system assigns automatically.
    - See the Organization & Management section for instructions on creating a Driver, Device, and Asset.
3. Click on the row to see the planned Stops and the Route on the map.

Each Route, for the selected date and Branch, has color-coded information that corresponds to the assignment status:

- White — Unassigned and not logged in
- Blue — Preassigned and not logged in
- Green — Assigned and logged in
- Grey — Assigned and logged off
- Orange — Route was completed out of sequence
- Red badge — Indicates there are Violations (how many and what types)



Conflicts and Violations

All conflicts and violations are displayed with color-coded badges. A number in the badge indicates multiple violations. Hover over the badge to determine the issue. Set violation priorities under Prescriptive Intelligence. See the Violations table for definitions.

Edit a Pre-assignment

For Routes that have **not been logged in**, editing the pre-assignment is done the same way as creating a pre-assignement in the section above. To unassign a Route, complete the steps below:

1. Determine if the Driver has logged into the Route.
    - If the Driver has **Not** logged in, move to Step 2.
    - If the Driver has logged in, undo the login event before moving to Step 2 (See Section below for instructions).
2. Navigate to the Route requiring unassignment.
3. Select *Unassigned* from the dropdown menu for each resource that needs unassigned, or right-click on the Route row and select *Unassign* to complete the task for all three resources at once.

Dispatch Toolbar

The Dispatch Toolbar provides users the ability to filter and sort Routes for assignment, finalize Routes, Send Notifications, Export Routes, and reschedule.

Filter Dispatched Routes

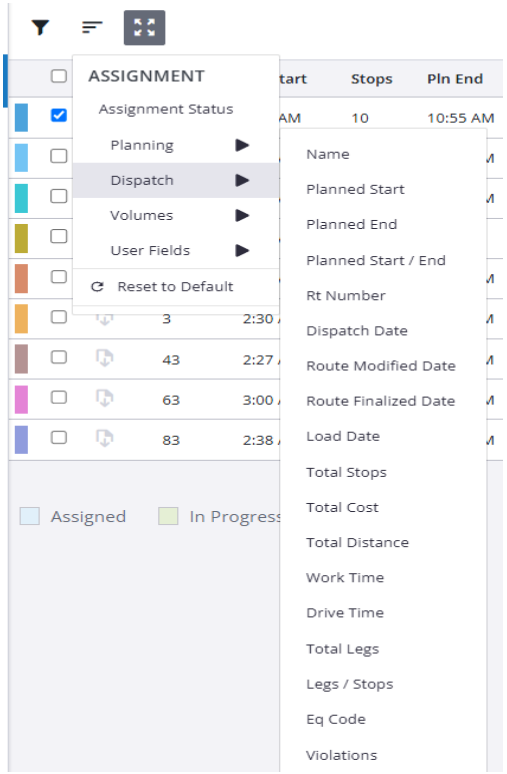
The data grid can be sorted very similarly to the Unloaded Orders or Routes. Filter the table by the following fields. Click on the filter funnel icon for the options.

- **Unassigned** — Route has not been assigned a resource (Device, Driver, or Asset).
- **Preassigned** — Route has been assigned at least one resource.
- **LoggedIn** — The Driver has logged in to the Route.
- **Logged off** — The Driver has logged off of the Route.
- **Not Logged In** — The Driver has not logged in to the Route yet.

Sort Dispatched Routes

Sort the Dispatch table by Route Planning variables, Dispatch fields, Volume settings, and User fields. Click the Sort icon for a list of options in the drop down menus (see *Figure 92* below).

- The Volumes and User Fields are set in DR Track and managed on the Preferences page under Aliases.



Finalize Dispatched Routes

The Finalize Routes action on the Dispatch page completes the same action on the Route Planning page. It identifies Routes ready to be integrated into the ERP or TMS system to allow focus on the completed Routes while avoiding the ones still in planning.

1. Check the Routes you wish to finalize.
2. Click on the blue *Finalize Routes* button in the toolbar, then view the confirmation message in the top right corner.

Send Notifications

The *Send Notifications* feature is a licensed service used to send Routes and Order status notifications to the Customer Communication Manager (CCM).

1. Check the Routes in the table you wish to send to the CCM.
2. Click on *Send Notifications* in the Toolbar.

Export Routes

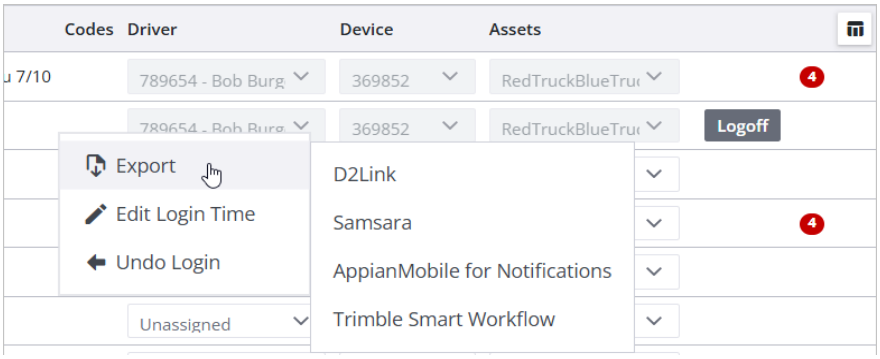
Use the *Export* button to export multiple or individual Routes to a variety of mobility and tracking integrations for mobile client applications. This allows it to be used for Route tracking and operational visibility during the execution of the Routes. Routes that have been changed after initial export require a re-export following the same instructions below.

Users may be required to do the following based on the telematics/ mobile integration chosen:

- Preassigned Drivers before exporting Routes
- Export a Route to distribute Route plans to Drivers

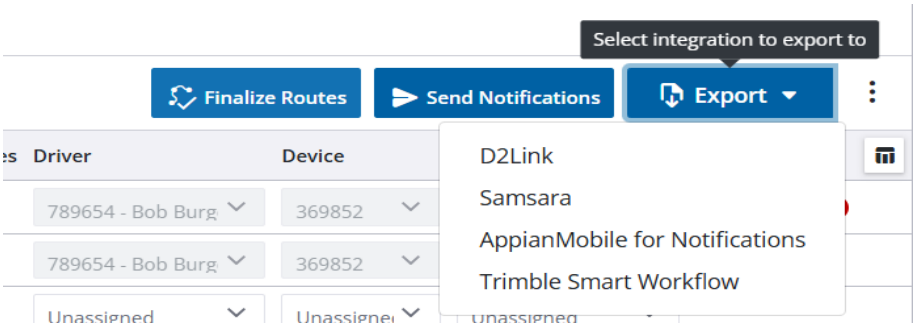
Individual Routes

1. Right-click on the individual Route row, and click on *Export*.
2. Select the Device type to export to (based on the integration package available).



Multi-Routes

1. Check the boxes next to each Route you wish to export.
2. Click on the *Export* button in the Toolbar.
3. Select the Device type to export to (based on the integration package available).



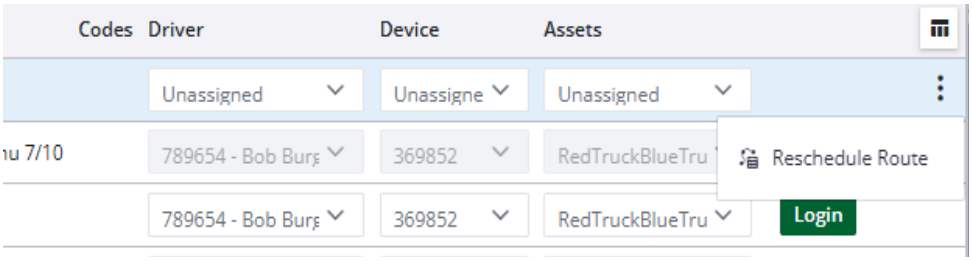
The status is displayed in the table with a color-coded export icon to the left of the Route number. Hover over the icon for the export status.

- Grey — Route is unassigned and not exported
- Orange — Route is preassigned but not exported
- Green — Route has been exported
- Red — Route has been exported but changed, and needs to be re-exported

Reschedule Dispatched Routes

Reschedule Routes using the More Menu in the toolbar (multi-Routes selection) or the More Menu in the individual Route row in the table.

1. Click on the Route(s) that need to be rescheduled.
2. Click on the More Menu, and select *Reschedule Routes.*
3. View the confirmation message in the top right corner.



Manual Login / Logoff

A dispatcher may want to manually log a Driver into or log a Driver off of a Route rather than using a telematics or mobile integration. Click the appropriate *Login* or *Log off* button on the assignment row (The time is set when the icon is clicked).

Undo Login/ Logoff

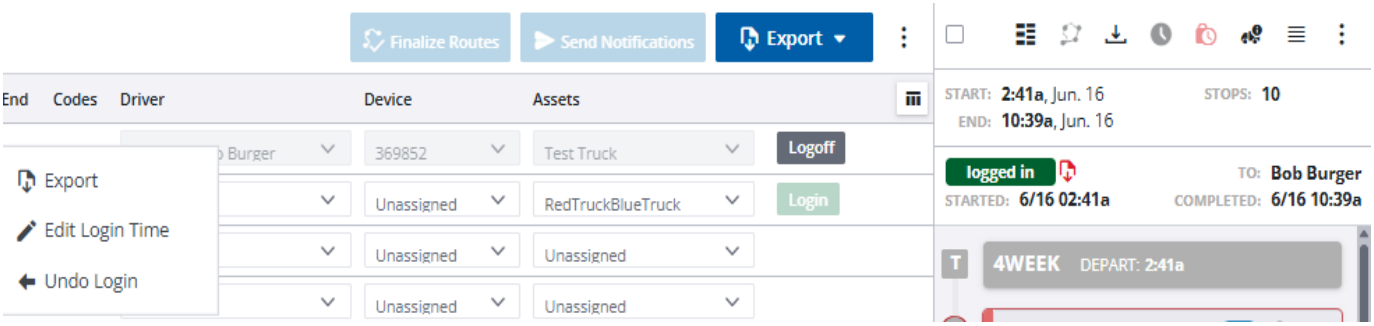
Cancel a login or logoff that occurred by accident or needs to be canceled.

1. Right-click on the Route and select the appropriate *Undo Login* or *Undo Logoff* button.
2. Confirm the action to remove the login event.

Edit Login Time

The login time of a Route can be updated if adjustments are required.

1. Right-click on the logged in Route and select *Edit Login Time*.
2. Change the start date and /or time of the Route login.
3. Click on *Change* to save the edits.



Optimize Sequence

Optimize Within uses the Appian algorithm to put stops on a route in the most optimal sequence while still meeting all of the constraints provided in the order, truck, and algorithm settings. To get to the Optimize Within tab you right-click on a specific route you want to optimize or you can select the Optimize Within tab on the left side menu. The Optimize Within tab allows you to view potential cost savings by optimizing a route and approving optimizations for multiple routes at one time. The tab shows you the current version of your route and a preview of the optimized route along with any changes in route start and end times, resequencing of stops, mileage, hours, and cost. Routes that have violations are not able to be Optimized Within. If a route is already in an optimal sequence then you will see a 'No Savings' message. If there are violations on a route, then a message will be displayed "Could not optimize due to violations".

To approve an optimization, select the Approve Button on each route and then select "Accept (X) Optimizations" in the bottom right. The deny button is not used at the moment.

If you optimize from the Route Card, you will not get the preview.

Optimization may cause the route start time to change if it is not locked.

Points of Interest (POI)

The POI feature allows you to identify and save geolocations on the map in a library that can be used in the same manner as a legitimate address when assigning and routing orders in DRTrack.

The POI feature can be useful for deliveries to locations where addresses may not yet be available (i.e. new construction), deliveries to rural or unincorporated areas, or when addresses are not updated and/or correct, but the physical location is known. Customers who spend a lot of time manually geocoding many orders will find the POI feature a great time-saver.

Capabilities include:

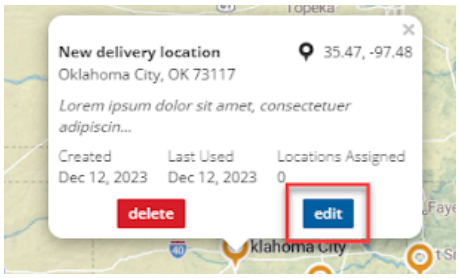
- Drop a pin on the map and save the location as a new POI.
- Assign POIs to unloaded orders from the Route Planning page.
- Unique names for every POI, saved in a library for use with any unloaded order and any customer.
- Searchable POI library with full edit permissions.

Once you've located an unloaded order that needs a POI assigned, choose the ***Assign POI*** icon and the application will open the Select a Point of Interest window where you can select an already existing POI or double-click on the map to create a new one.

Creating, Editing, and Deleting POIs

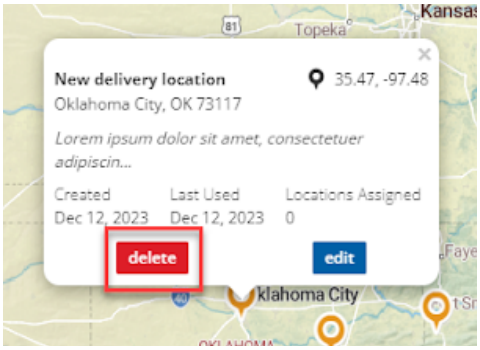
To create a new POI, double-click anywhere on the map, or **Right-click > New POI**. The ***Create New Point of Interest*** window will open allowing you to add a name, notes, and type (commercial or residential). You can edit the latitude and longitude, or drag the map pin to make adjustments to POI placement. Upon clicking **Create** the new POI will appear in the POI panel. The map style can be customized independently between the main page and the create/edit windows if you prefer to use something like satellite view for fine-tuning.

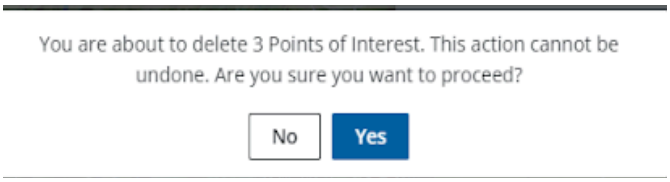
You can search using the map search bar at the top left of the screen.



POIs can be edited at any time by clicking the pencil icon on the POI card or by clicking the **Edit** button from the map card.

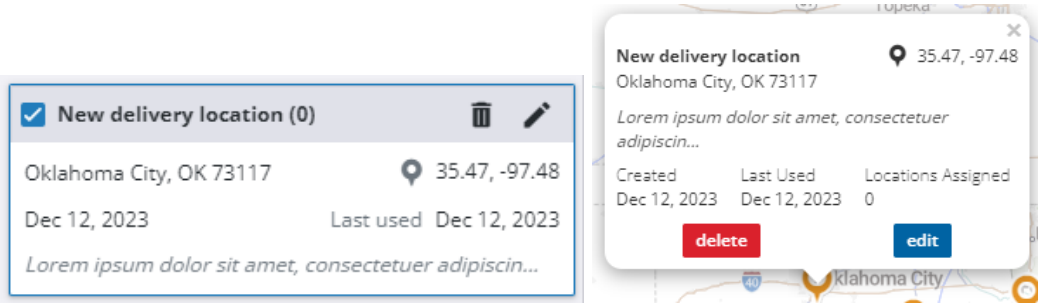
POIs can be deleted at any time by clicking the trash can icon on the POI card or by clicking **Delete** from the map card. Batch delete is also available by selecting multiple POIs and clicking the Delete button at the top of the POI panel. A confirmation popup will ask if you are sure they would like to delete the POI to prevent accidental deletion.





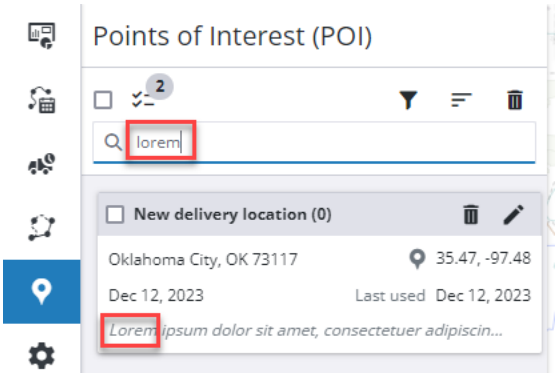
POI Panel and Map Cards

The panel card and map card will both show the name, address, latitude and longitude, notes, created date, last used date, and number of locations the POI is assigned to. You can click the notes from the panel card to view the full note, or they can hover over the note on the map card.

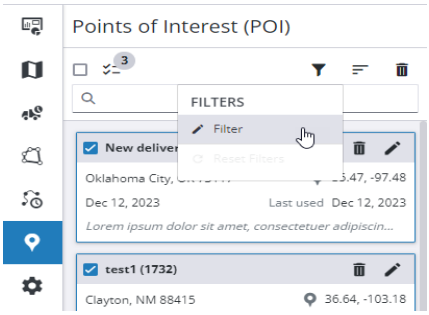


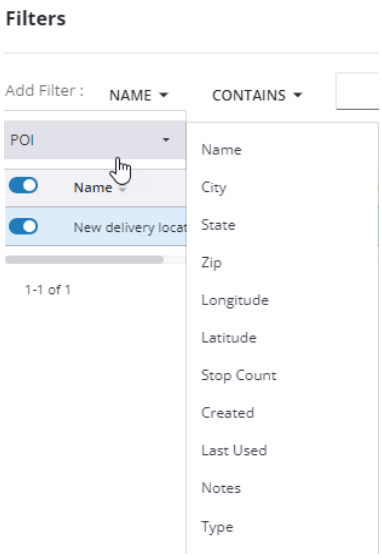
Searching, Sorting, and Filtering POIs

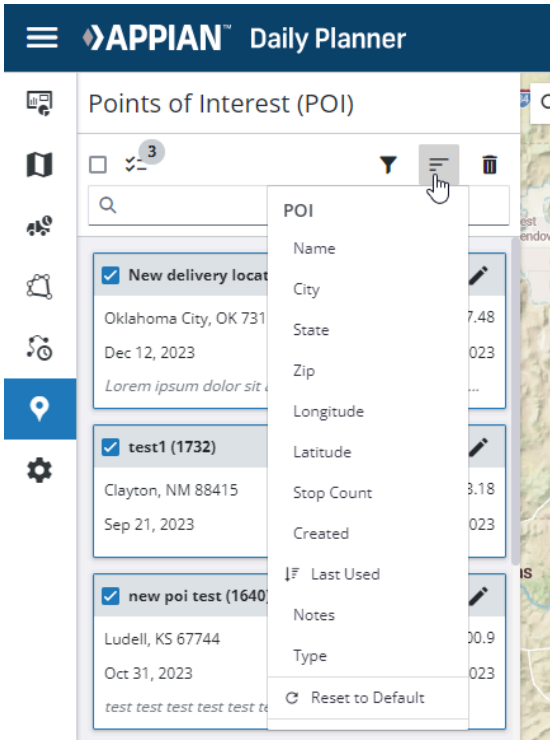
POIs can be searched from the search bar at the top of the POI panel. You can search by name, address, city, state, ZIP code, and notes.



You can also filter and sort the list of POIs by POI-specific fields. The POI list sorting defaults to the Last Used date in descending order.

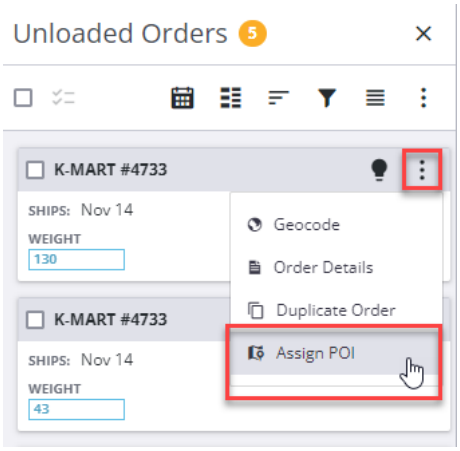




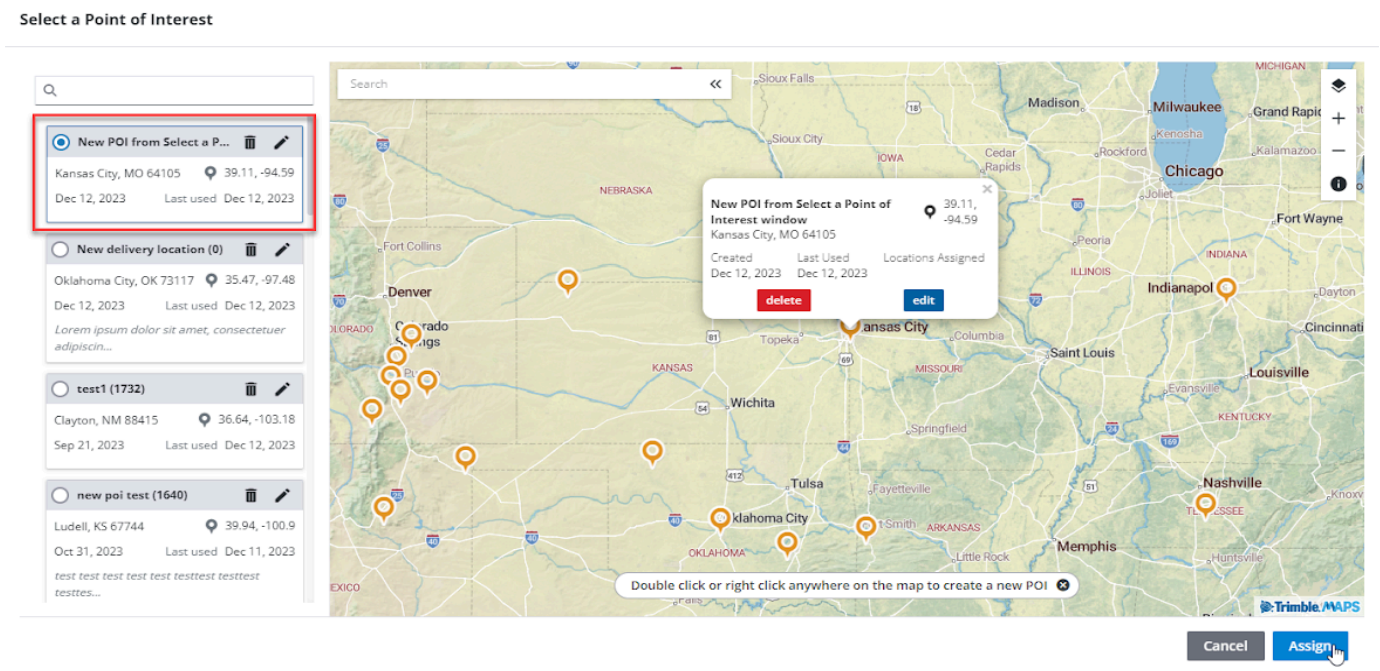


Assigning POIs

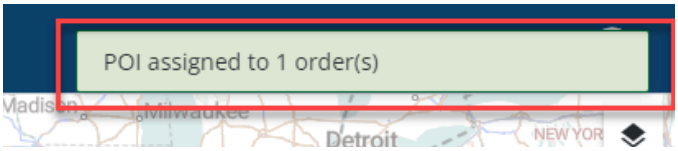
POIs can be assigned to unloaded orders on the Route Planning page either through the batch action or for an individual card or row. To assign a POI, click the more menu (three dots) on a card, then click **Assign POI**.



The ***Select a Point of Interest*** window lists the POIs created in Resource Calendar that can be searched, sorted, and filtered in the same way as on the POI page. You can create, edit, and delete individual POI records from here.

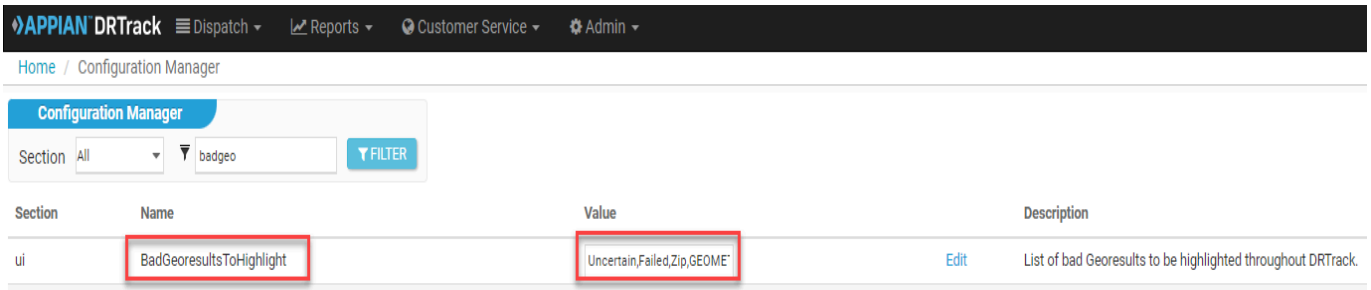


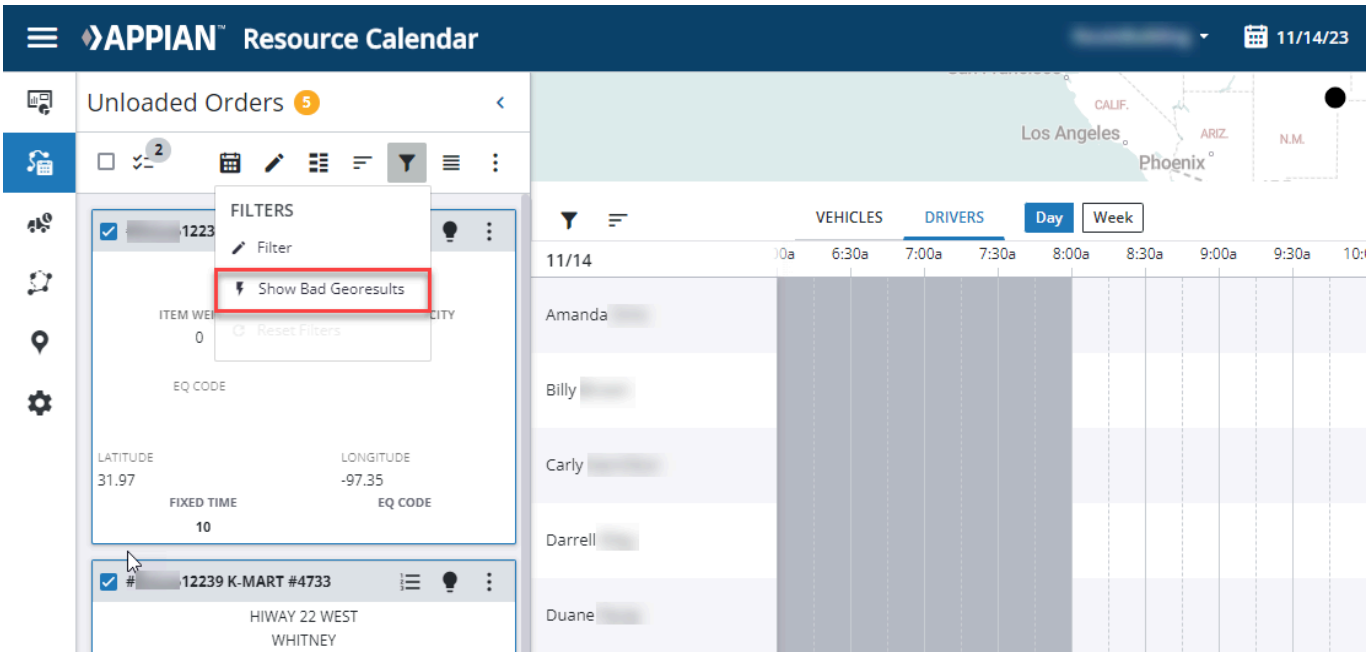
A notification appears at the top-right indicating you've successfully assigned a POI.



Show Bad Georesults Filter

Being able to quickly filter orders with bad georesults can help make matching POIs to orders easier. ***The Show Bad Georesults*** filter in the Unloaded Orders panel is based on the BadGeoresultstoHighlight setting in DRTrack. This setting can be adjusted in DRT's Configuration Manager.





Accounts

Resource Calendar allows a user with permission to view and modify customer accounts. The Accounts table displays accounts based on the branch you are currently viewing and defaults to 50 results per page. The table can be dragged left and right so that you can pick how many columns you would like to view at a given time.

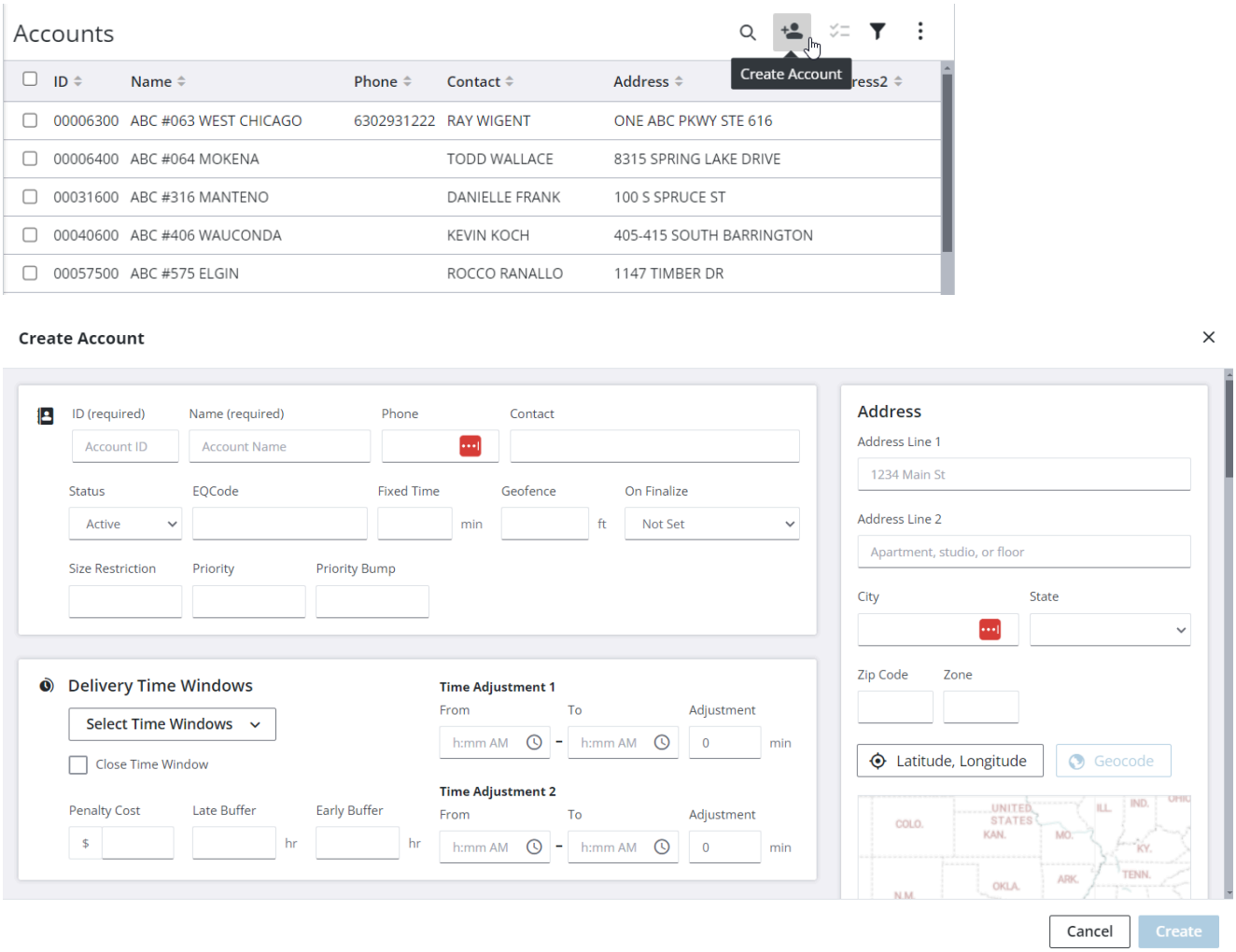
You can hide any of the columns mentioned below by using the table configuration button in the upper right corner of the accounts table. Table columns can also be dragged into a different order if desired. These custom configurations are saved locally per user, per browser and can be reset by clicking Reset Defaults from the table configuration drop-down.

Fixed Route activation, termination, frequencies, and services per day can also be set at the account level, if applicable.

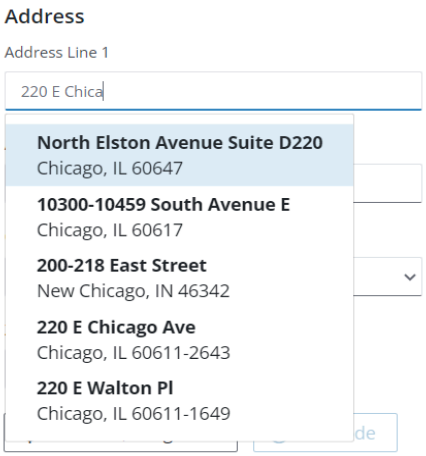
To open the Accounts table, click Accounts in the left sidebar.

Creating Accounts

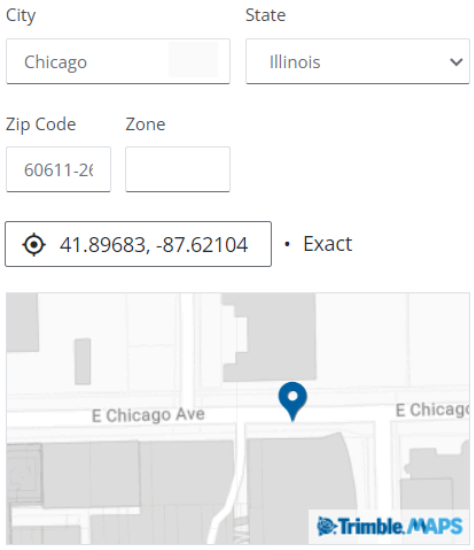
You can create new accounts from Resource Calendar by either right-clicking on the map or by clicking Create Account at the top of the Accounts table. The Create Account window opens over the table/map view and will pre-populate with data if there is a primary account set. These values can be changed. The form will start blank and you can add values as needed. Account name and ID are required fields that must be filled out to create a new account. You can close the window by clicking the X in the upper right corner.



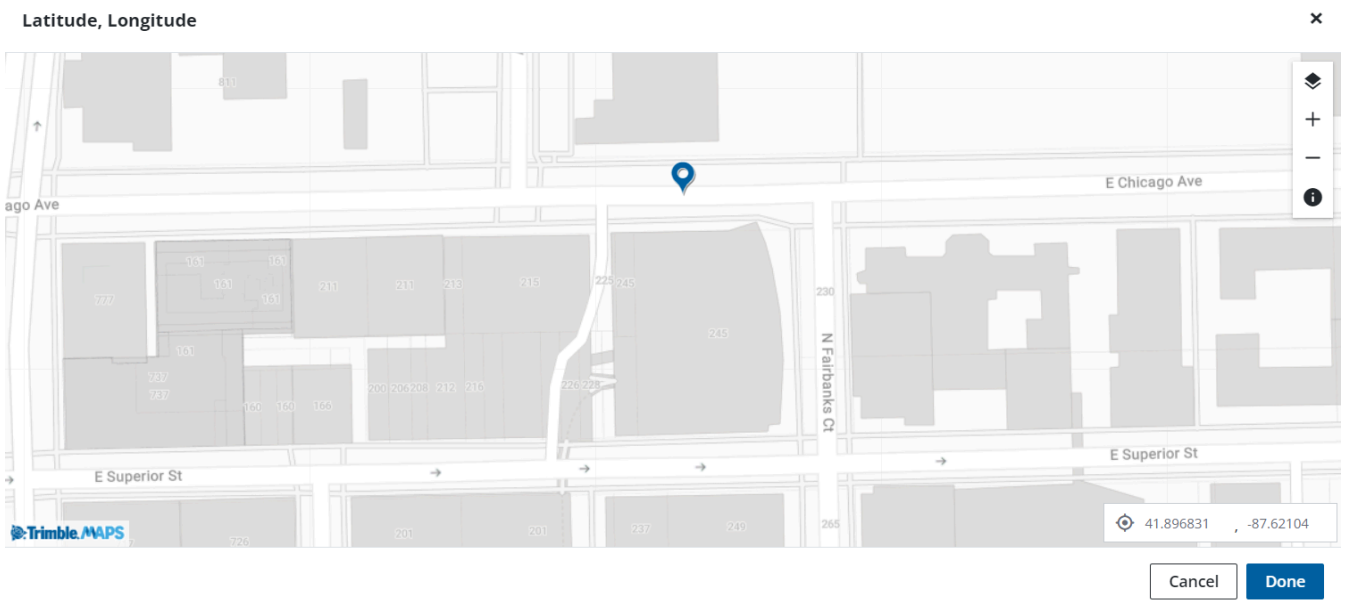
Typing into Address Line 1 automatically generates address suggestions as you type. If you choose a suggested address, all address fields will automatically populate relevant fields, including City, State, and Zip.



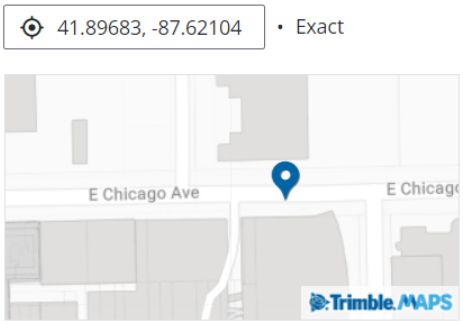
If you would like to geocode the account you can click Geocode. Once Geocoded, the georesult will show in place of the Geocode button. You can re-activate the Geocode button by either changing the address in some way or by clicking the Latitude Longitude button.



If you would like to manually adjust the latitude and longitude of the account pin, you can select the Latitude Longitude button. This opens a window where you can drag and drop the account pin on the map to select a specific latitude and longitude. Clicking Done accepts changes while clicking Cancel closes the window without making changes.

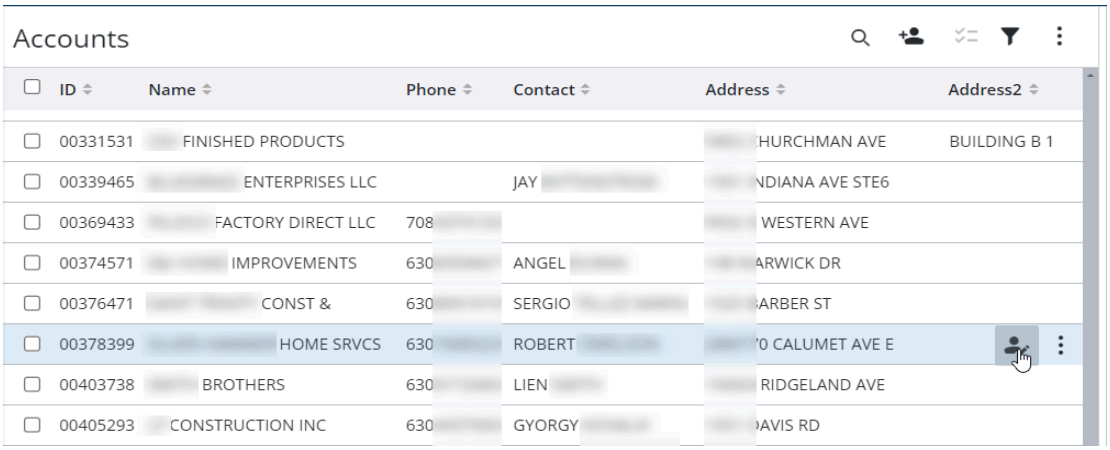


Below this section, the account will display a mini-map based on the address information provided.

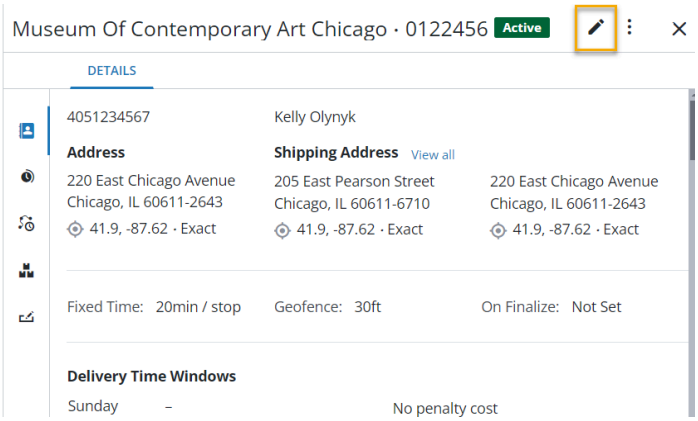


Editing Accounts

You can edit accounts directly from the accounts table or the static account view. Hovering over an account will show the edit and more menu (three dots) actions. From there, you can click on the edit icon to open the Edit Account window.



Alternatively, if you are already viewing the static details of an account, you can click the edit pencil in the top menu bar.



You can also fine-tune the latitude and longitude of an existing account using the last known stop as a reference.

Sorting and Filters

You can filter the accounts table with status filters and sort by clicking the column headers. The accounts table can be sorted by the following criteria:

- ID
- Name
- Phone
- Contact
- Address
- Address2
- City
- State
- Zip
- Georesult
- EQcode
- Shipping Address

Searching Accounts

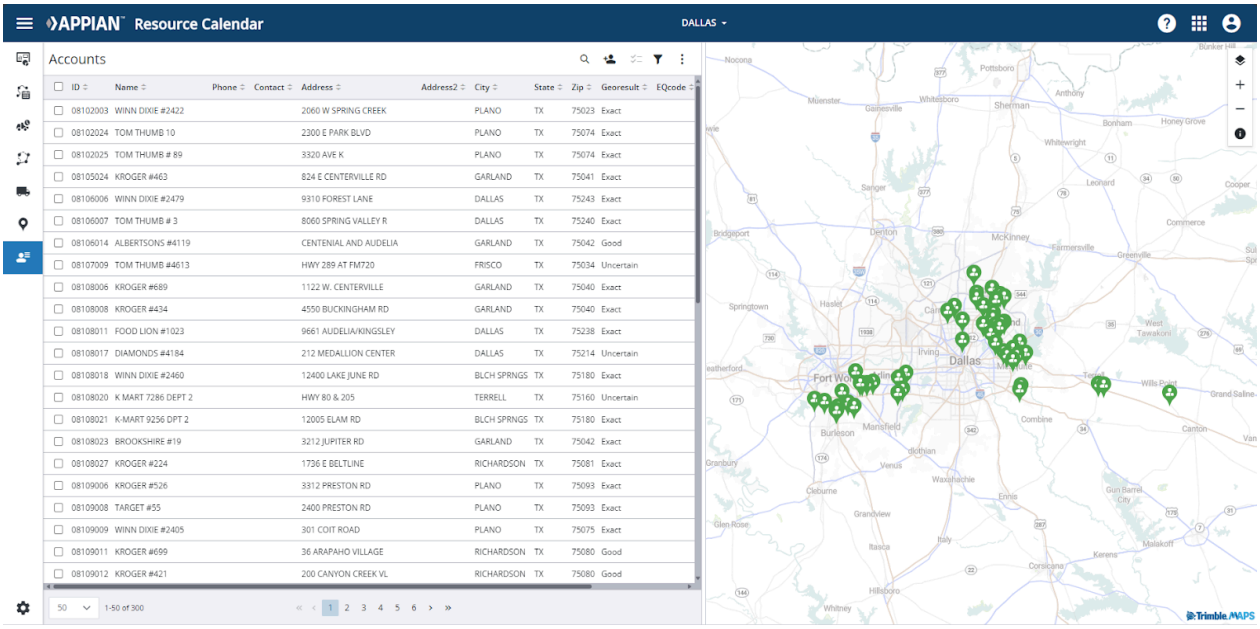
The search bar located at the top-right lets you search Accounts using the following fields:

- AccountID
- AccountName
- Address
- City

To find the account you are looking for, begin typing these fields into the search bar.

Accounts Map

The accounts map displays pins for all accounts on the current page of results in the accounts table. Clicking on a pin from the map will scroll to that particular account in the table. Navigating to another page in the table will refresh the map to show the accounts on that page.



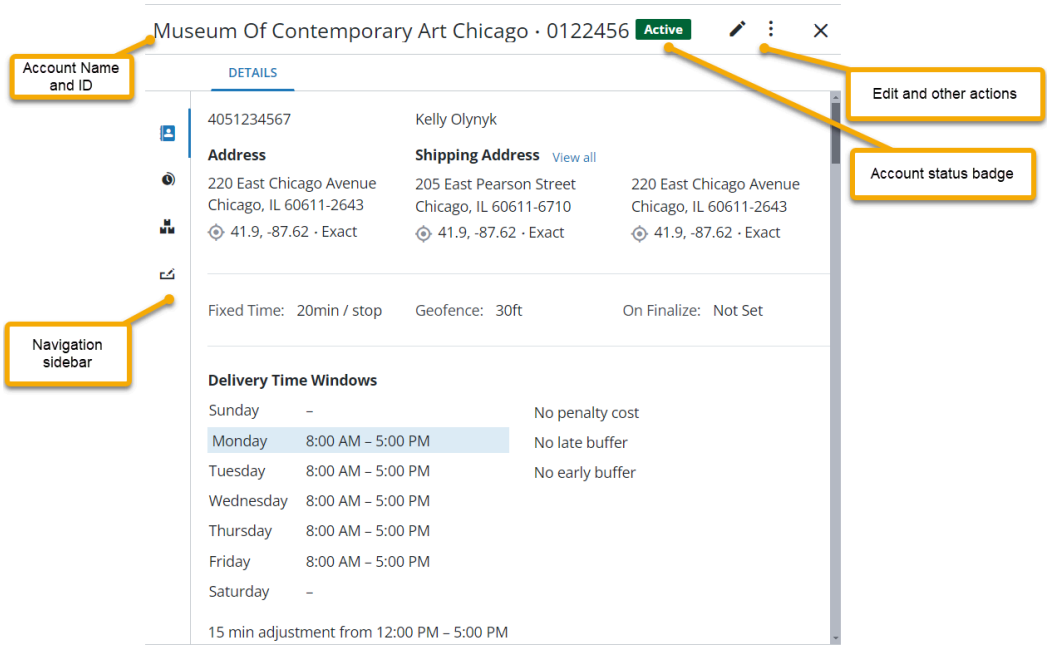
Map Icons:

Active	
Inactive	
Hold	

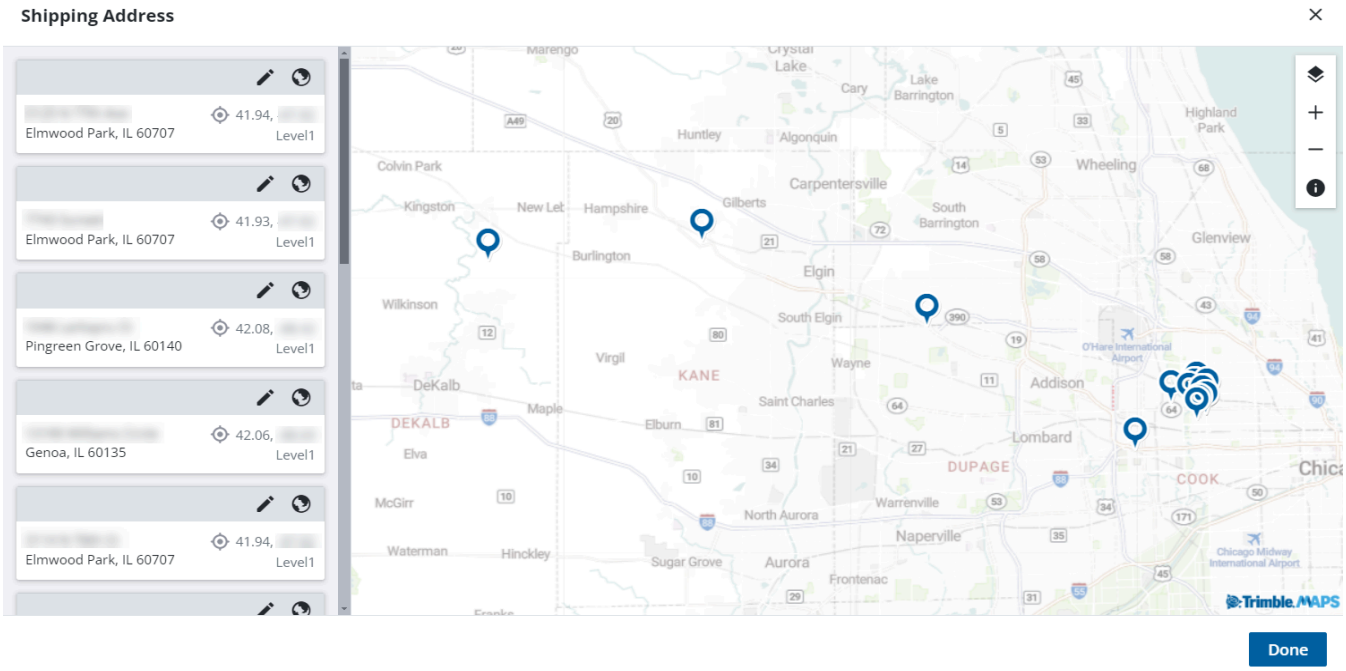
You can right-click anywhere on the map to see the Create Account action. Selecting Create Account from here will reverse geocode and insert address data based on the selected location. If a primary account is set that has address information associated with it, then this will overwrite the primary account address with whatever was geocoded. You can then edit the address or add other account details as described in the Create Accounts section.

Static View

If you want to view account information without making changes, you can click on any account in the table to open the static accounts window. This window shows all details related to the selected account in a read-only format. You can also see a full list of all shipping addresses associated with the account by clicking View All. The static account pane has a sidebar menu you can click to automatically navigate to the section of the account you want to view. You can also select to edit an account or take another action on it from the actions available at the top of the pane. Once you are done viewing the static account details you can close the window by clicking the X in the upper-right corner of the pane.

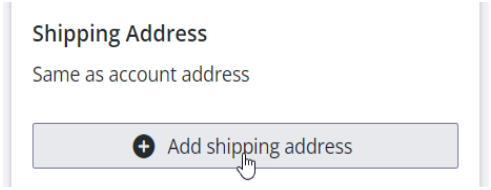


Clicking View all next to Shipping Address opens the Shipping Address window. Here you can edit or geocode shipping addresses associated with the account being viewed. Clicking on an address in the list will center the map on that point while clicking on a point from the map will automatically scroll and highlight the address in the sidebar. You can close the window by clicking the X in the upper-right corner.

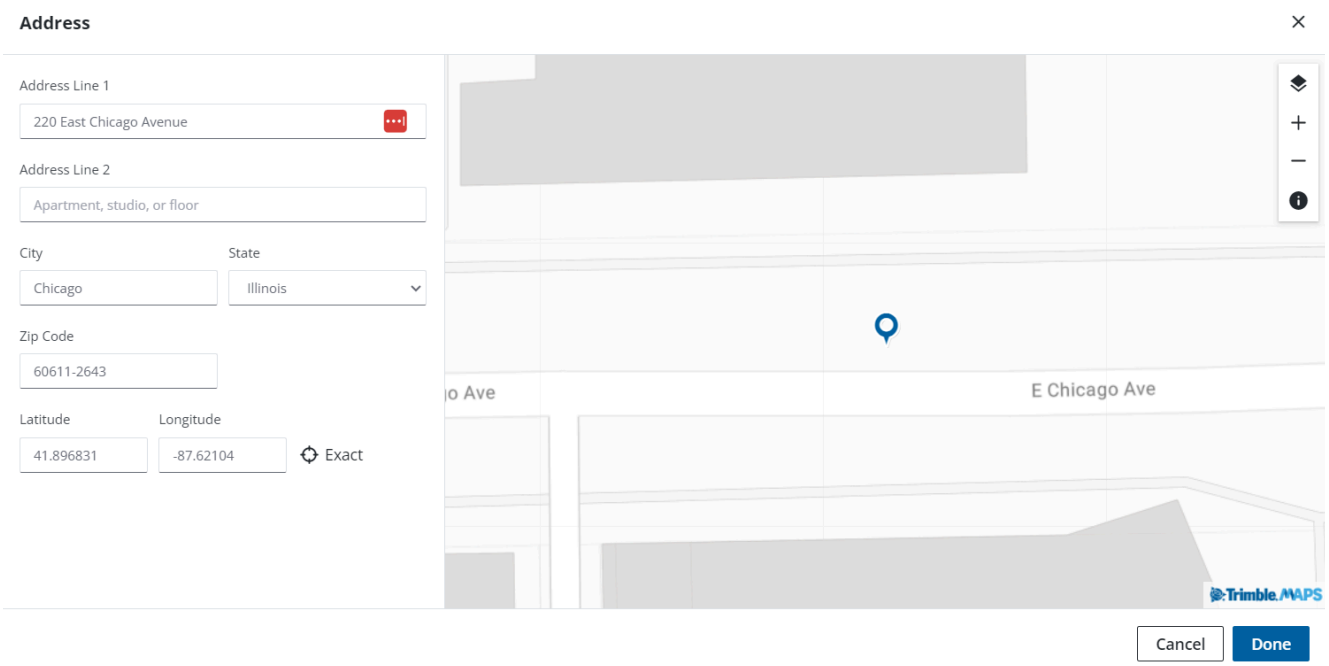


Shipping Addresses

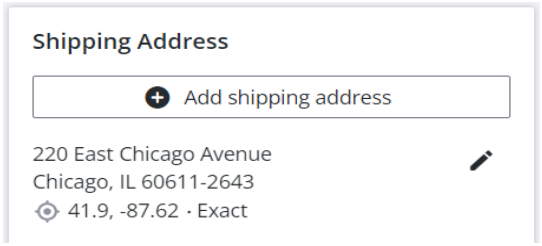
Shipping Addresses (also known as Ship-tos) can be added to an account. Shipping Addresses can be used in place of the original account address for routing purposes. An account can have any number of shipping addresses. If no shipping address exists for a given account the shipping account section will show the same as the account address.



To add a new shipping address, click Add Shipping Address. This opens the address window where you can enter the new shipping address and geocode it. Clicking Done accepts address changes while clicking Cancel closes the window without making changes.

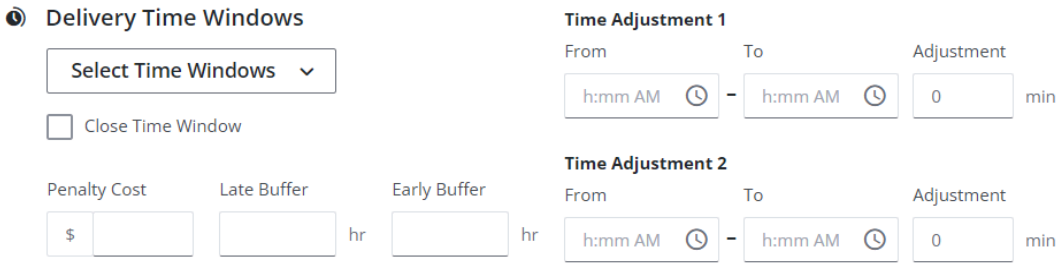


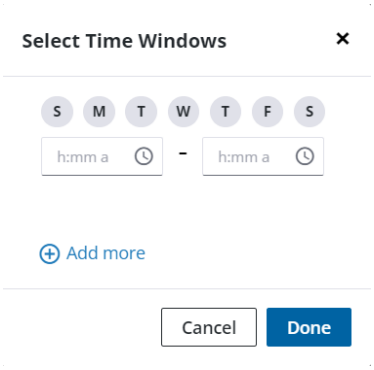
Once a shipping address is added for an account you can see it in the Shipping Address section under the Add Shipping Address button.



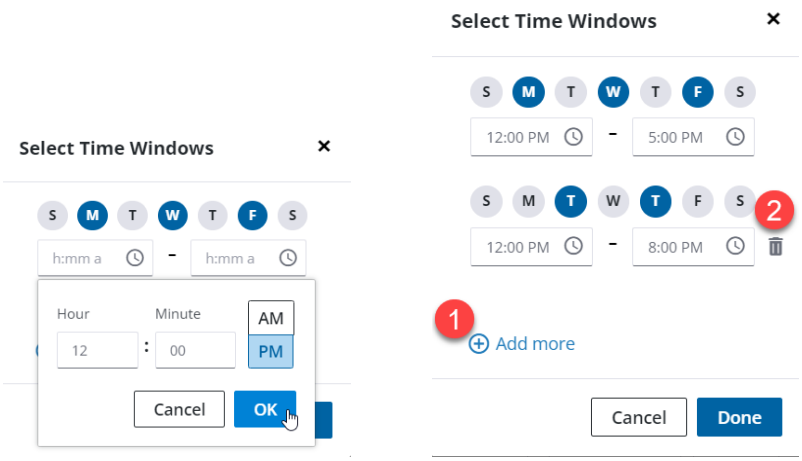
Delivery Time Windows and Time Adjustments

You can manage account delivery time windows and time adjustments from the account page. If no delivery time windows exist you can click on the Select Time Windows button to open the Select Time Windows window.



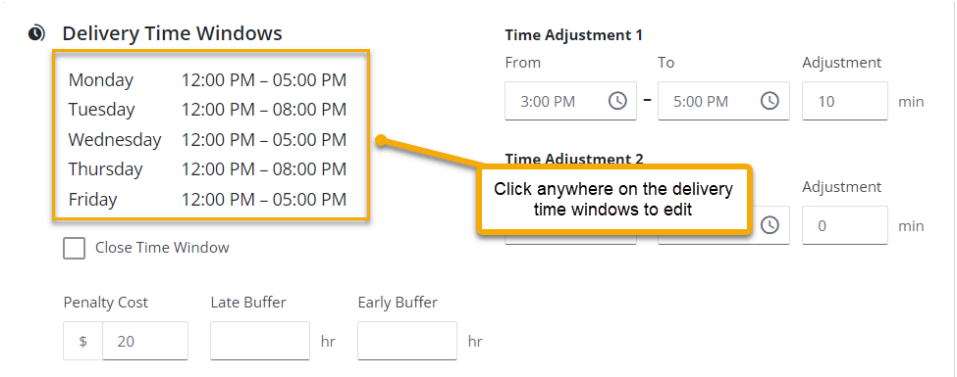


You can select the days of the week and time by clicking each of the fields and selecting those values.



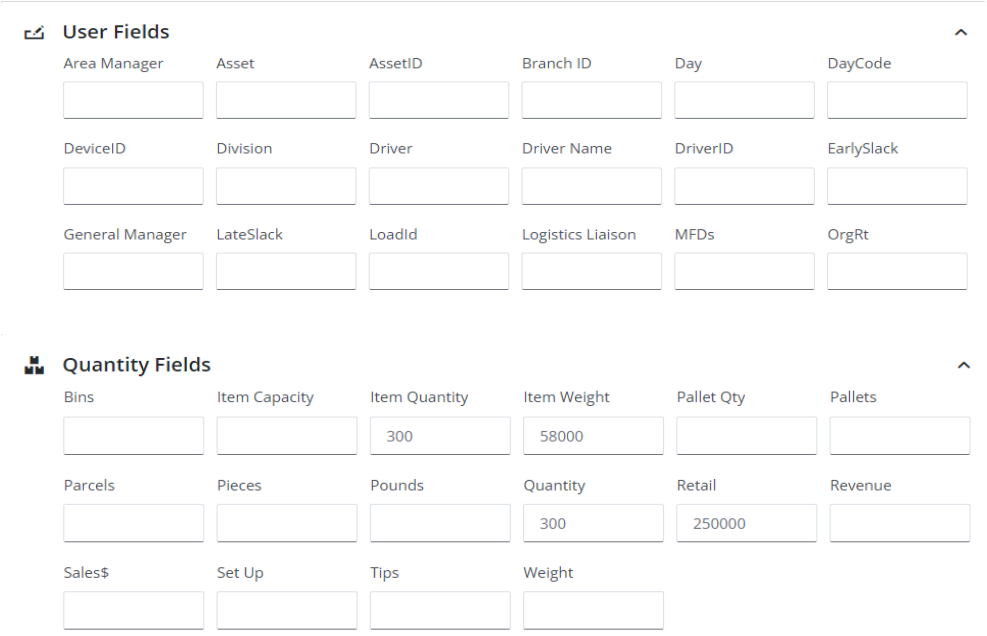
1. If an account has multiple delivery time windows you can click the Add More button to add additional time windows.
2. You can also remove additional time windows by clicking the trash can icon next to the time window.

Click Cancel to exit the window without saving changes or click Done to accept your changes. Once time windows are added, they will display in a text view. If further changes are needed you can click anywhere on the existing time windows to re-open Select Time Windows.



User and Quantity Fields

Quantity and User fields are dynamically displayed based on which fields are visible according to your alias settings in Preferences > Aliases. Each section can be collapsed or expanded by clicking the up or down caret.



Other Account Actions

Geocode — geocodes the address on the account.

Duplicate Account — creates a copy of an existing account.

Set as Primary (admin only) — allows an administrator to set default account values on the company level. If a primary account is set then the default values will pre-populate when any user creates a new account.

Unset Primary Account (admin only) — allows an administrator to un-set default account values on the company level. This action will only show to you if you are viewing individual account actions for the account set as the primary.

Permissions

Users with administrator permissions can take any action on the Accounts page. In addition, administrators can set an account as the primary account for the company. A primary account is an account template that can be used to auto-fill fields when creating a new account. It is important to note that a primary account is set per company, not per branch. If you do not want fields auto-filled when creating a new account then there is no need to set a primary account. A primary account can be identified by the Primary label next to the account name.

Use the table to determine permissions requirements.

PERMISSIONS	ACTIONS ENABLED
ACCOUNTS	
Create Accounts	Create a new Customer Account
View Accounts	● View customer accounts ● Accounts page is hidden if not enabled
Modify Accounts	Edit customer accounts
Administrator	● All Account actions ● Set Accounts as Primary
ROUTING	
View Routes	● View Routes located on ARC and on the Map by Day or Week ● View all Scheduled Time Blocks in Day / Week View; Reservations, Maintenance and PTO ● Use View Routes Details option on the Route card and edit corresponding DRTrack page
Create Routes	● Create Routes via the Route Calendar by dragging and dropping from Unloaded Orders panel ● Create Routes via the Lasso Tool on the Map (Lasso is hidden when not enabled).
Modify Routes	Can complete the following for Routes already created on the Route Calendar and Map: ● Change Start Time and Date ● Change Assigned Assets and Drivers ● Add and/ or remove Orders ● Use the Optimize Route option (option is hidden when not enabled).
Delete Routes	Use the *Unload Route* option from the Route card dropdown (option is hidden when not enabled).
Manage Trucks	● Use *View Truck Info* option on the Route card dropdown and edit corresponding DRTrack page ● Schedule Maintenance blocks for Assets on the Route Calendar (option is hidden if not enabled). If not enabled: ● Cannot View Route Details (option is hidden) ● Cannot Print Route Details (option is hidden)
DISPATCH	
Export Routes	Use the Export icon on Route card and export routes
ORDERS	

View Orders	● Interact with the Unloaded Orders panel (option is hidden when not enabled). ● View Unloaded Orders in the Unloaded Orders panel and on the Map ● Use the POI Manager icon located on the Unloaded Orders panel ● If not enabled, user cannot Modify Orders
Modify Orders	● Use the More Menu located on each Unloaded Order card (option is hidden when not enabled). ● Access to the following options: Edit corresponding DRTrack page, Geocode, Duplicate Order
Create Appointments	● Create Reservations on both the Asset and Driver views ● PTO is not affected by this Permission; user can still create PTO blocks
Modify Existing Appointments	Use the Edit option on existing Reservations to modify the following: ● Notes ● Start/ End Date and Time ● Assigned Asset and Driver
Delete Appointments	Use the Delete option on existing Reservations
DRIVERS	
View Drivers	Create PTO blocks for Drivers
SITE	
An Administrator	Interact with the Preferences tab (option is hidden when not enabled): ● User can change Aliases ● User can set Violation parameters ● User can set Calendar Start Time and Business Hours/ Days
BRANCHES and DISPATCH GROUPS	
View Branches	● View the Organization & Management landing page and sidebar menu ● View the Branches & Dispatch Group tiles. ● See all Branches and Dispatch Groups on the page ● Cannot manage Branches and Dispatch groups if not enabled
Create Branches	● View the **+ sign** to add a new Branch or Dispatch group on the coorelating panes. ● Cannot modify or delete Branch and Dispatch groups if not enabled
Modify Branches	● See the **pencil icon** next to each Branch ● Click on a Dispatch group name to edit ● Cannot delete a Branch or Dispatch group if not enabled
Delete Branches	See the **trash can icon** next to each Branch name or Dispatch group and be able to delete it.

Preferences

The Preferences page provides five different areas to set Branch and global rules for Route planning. Everything from violations, algorithm settings, and business rules are managed here.

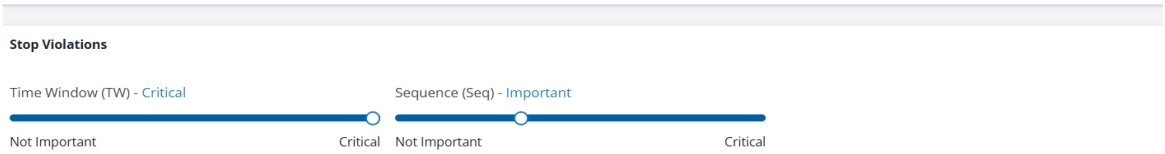
Prescriptive Intelligence

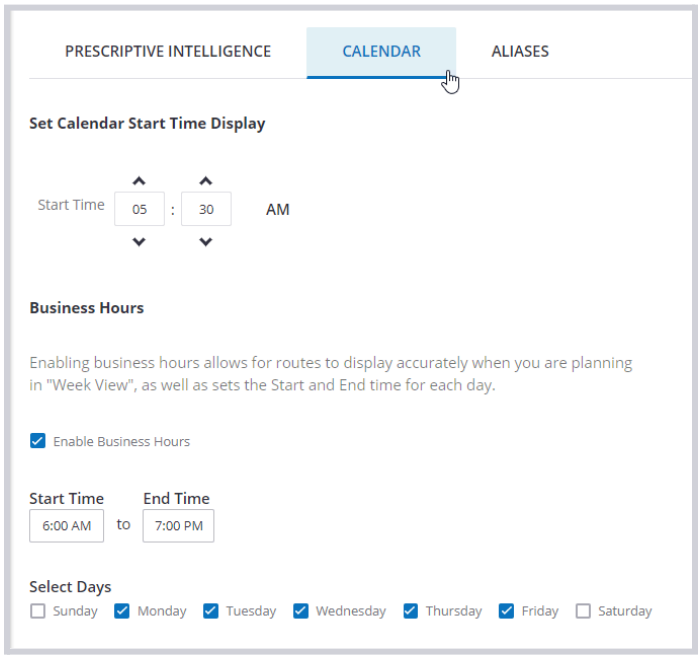
Establish the priority level for each violation type, from not important to critical. Each priority level determines how Resource Calendar displays and/or sorts violations on the Routes Panel.

- Violations appear on the Route card or the Stop card when a route is pinned, depending on what the violation directly affects.
- Violations appear as color coded circles on the Route or Stop card and Dispatch depending on the violation and its priority.
    - Not important — white circle
    - Important — grey circle
    - Very Important — orange circle
    - Critical — red circle

Violation	Route Card	Stop Card	Dispatch	Dashboard
Cap (Capacity) — Truck capacity has been exceeded	✔		✔	
CFLT (Scheduling Conflict) — Resource (Driver or Asset) has a period of time overlapping multiple Routes. To resolve, reassign a new resource or reschedule.			✔	
DM (Delay Minute) — The Stop-level warning shows how many minutes the Stop is late based on actuals. The Route-level warning shows the last delayed Stop (non-cumulative). Displays as a number	✔	✔	✔	✔
Dist (Max Distance) — Max distance for the truck has been exceeded	✔		✔	
Drv (Drive Time) — Total allowed drive time for the Truck has been exceeded	✔		✔	
EQ (Equipment Code) — The assigned Truck and loaded Stop are incompatible		✔	✔	
Ret (Return Time) — The total trip time has been exceeded	✔		✔	
SEQ (Sequence) — Sequence code entered was not followed		✔	✔	
TW (Time Window) — Delivery is expected outside of the allowed times for the stop		✔	✔	
Wrk (Work Time) — Set work time has been exceeded	✔		✔	

Statistics are displayed on the Unloaded Orders and Solution Comparison panes within the Solution Statistics panel.





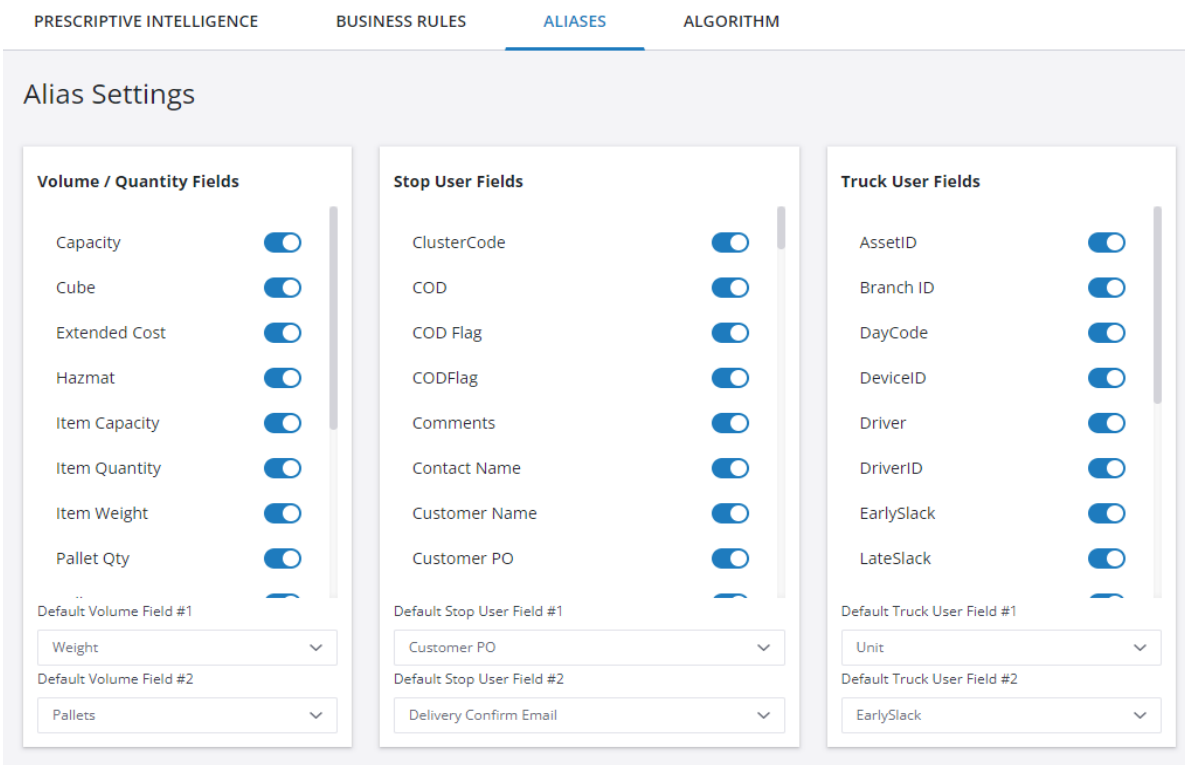
Calendar Start Time — Changes the default time the calendar begins, which is 5:30am by default.

Business Hours — Select what your normal business days and hours are. When enabled, hours outside this range will appear as dark grey on the calendar, allowing you to easily see which routes are running outside your set range.

In the example above, business hours are set between 8:00am and 5:00pm.

Aliases

Aliases created in DRTrack will be shown in Resource Calendar. You can toggle Aliases on/off. Aliases that are toggled off will not be shown on the corresponding dropdown lists.



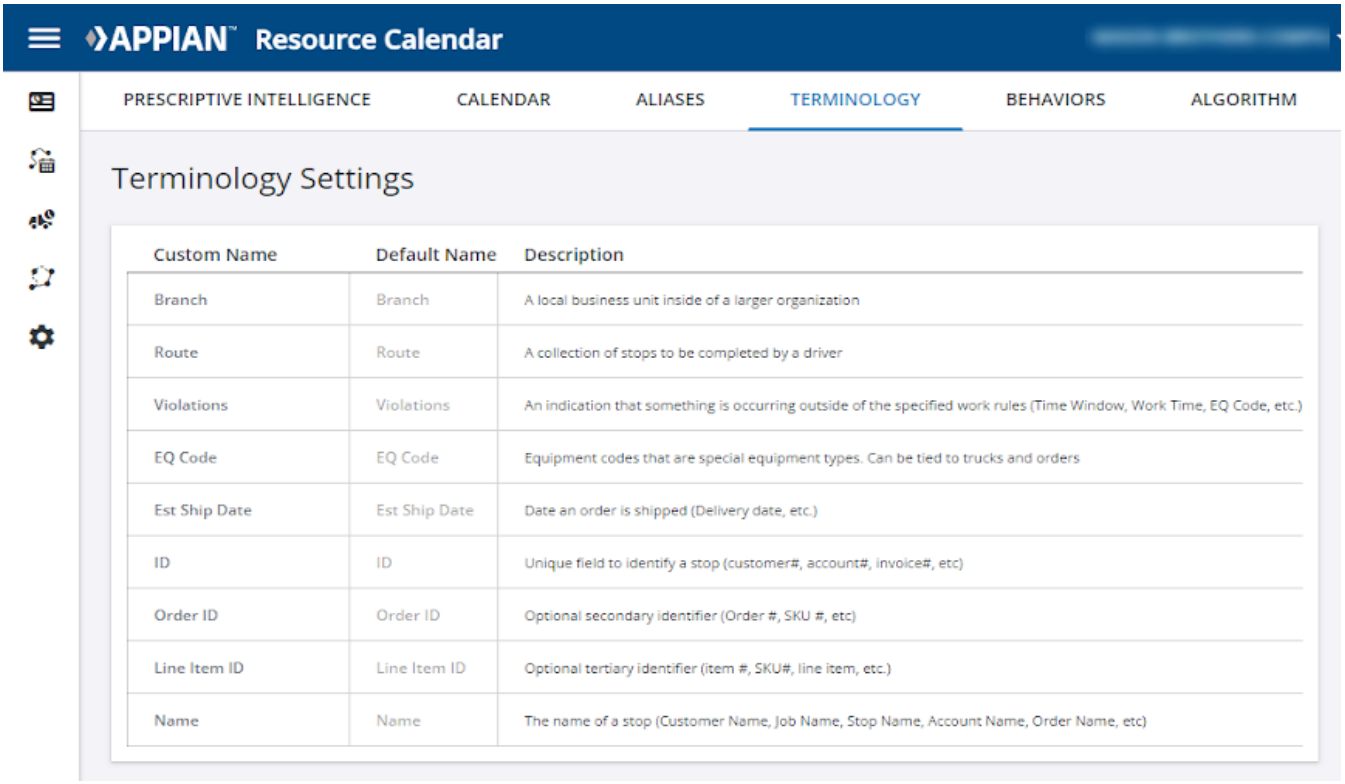
	Volume #1	Volume #2	Stop User #1	Stop User #2
Solution Statistics Unloaded Orders pane	✔	✔		
Unloaded Orders cards within Unloaded Orders panel	✔			
Loaded/Unloaded Order Map popups	✔	✔	✔	✔
Boundary File Cards in Boundary Tab	✔			

The table above shows where the selected Aliases are displayed within Resource Calendar. Currently, Truck User Fields are not shown anywhere.

Terminology

You can change the wording of common fields found throughout Resource Calendar that will coordinate with your company's common terms.

If your organization calls a *branch* a *terminal*, you can specify this here, and it will update everywhere in Resource Calendar accordingly. Please note that this is only for labeling, and no other functionality including data transfer is affected by this change.



Behaviors

Stop Delivery Time vs Route Start Time — Disabled by default. Determines the route's start time behavior when routes are created via order dropping onto the calendar. Enabling this will force Resource Calendar to use the drop location of orders to determine the first stops' delivery time. Trip start time will be considered secondary and is set via parameters already entered.

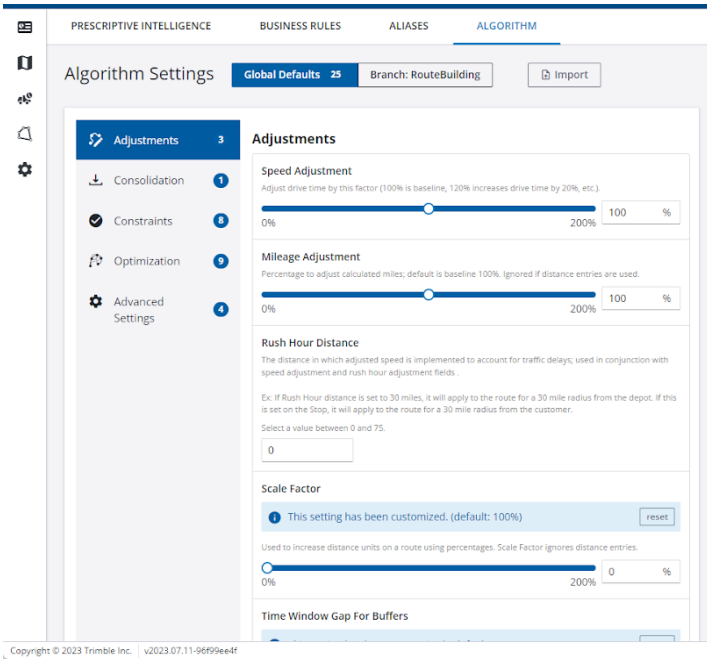
Lock Route Start Time — Enabled by default. This configuration setting determines the locking state of a route's start time, dropping orders onto the calendar for route creation. Disabling this causes newly created trips to be set to unlocked, and its start time will be set to the designated time the order was dropped to the calendar. This allows for greater flexibility to change the start time, loading more stops, and additional optimizations.

You can manually lock a trip's start time from its trip card at any time.

Append Trip Number to LoadID — Disabled by default. Determines if the trip number will be appended to the LoadID when creating trips. Enabling this applies it when trips are created.

Algorithm

Configure the settings that govern how the route-building algorithm and optimization algorithms function. There are defaults set for each setting but can be changed according to your needs.

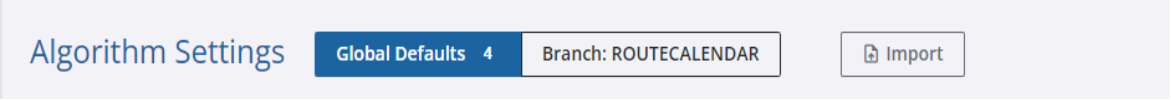


The settings are broken down into six sections, keeping the relevant and related settings together. These sections are:

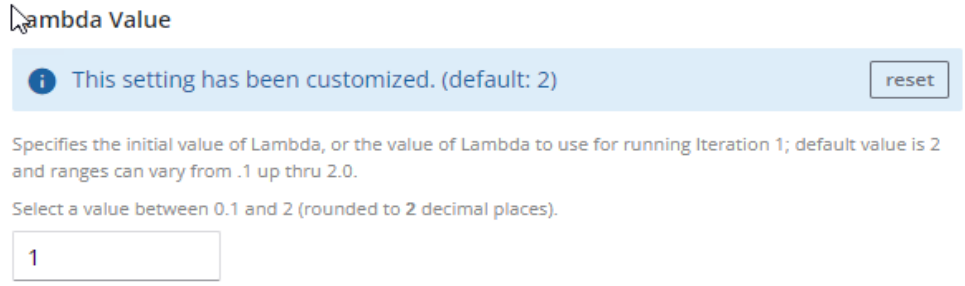
- Adjustments
- Consolidation
- Distances
- Constraints
- Optimization
- Algorithm

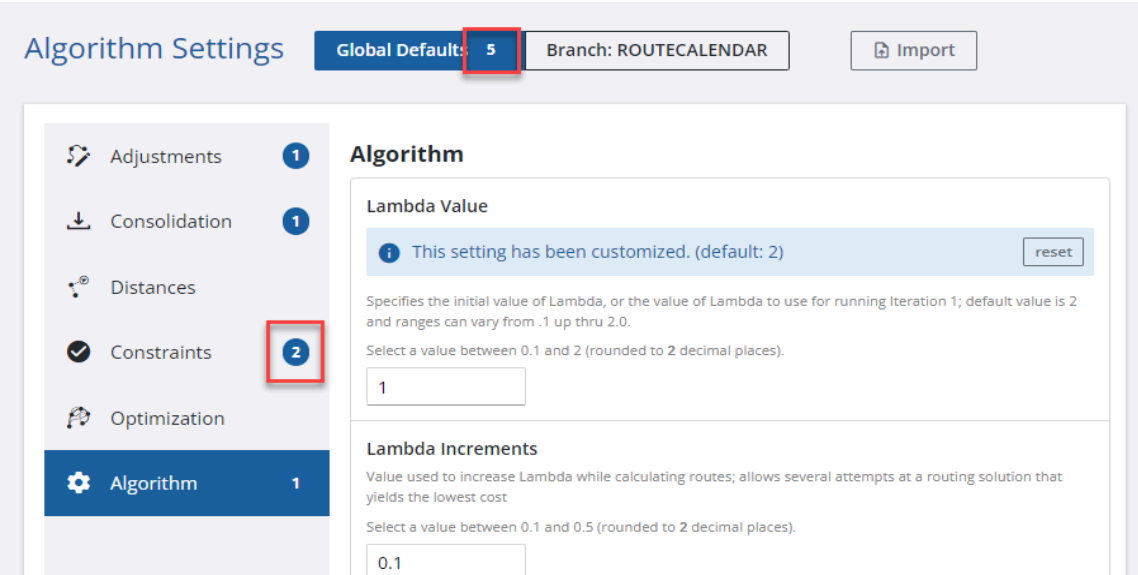
Inside each section is a listing of settings that impact the way the system uses the algorithm to help build routes, optimize routes, or guide you with decision support like violation badges. Each setting has a description of how the setting impacts the application and a default value. Depending on the setting, adjusting the value can be done through text entry of the value, slider bars, radio buttons, or toggles.

Before adjusting a setting, you can adjust if the change should be organizational or at the branch level by selecting either the Global Defaults box or the Branch box (Global Defaults) is selected by default.

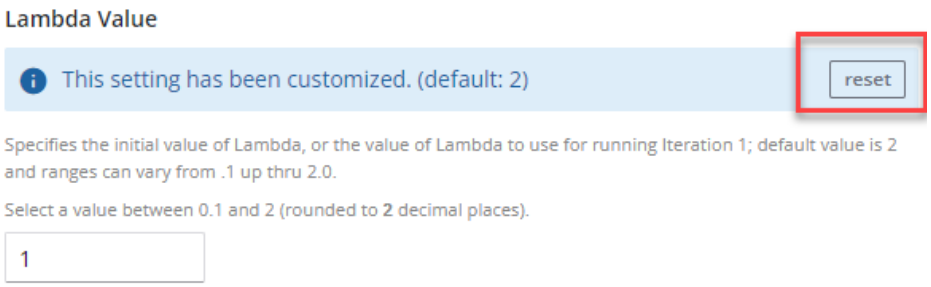


After a setting is updated, the application shows that the setting has been adjusted away from the default and a badge appears on the section name AND the Global Defaults/Branch box that shows a count of the number of settings that have been changed.

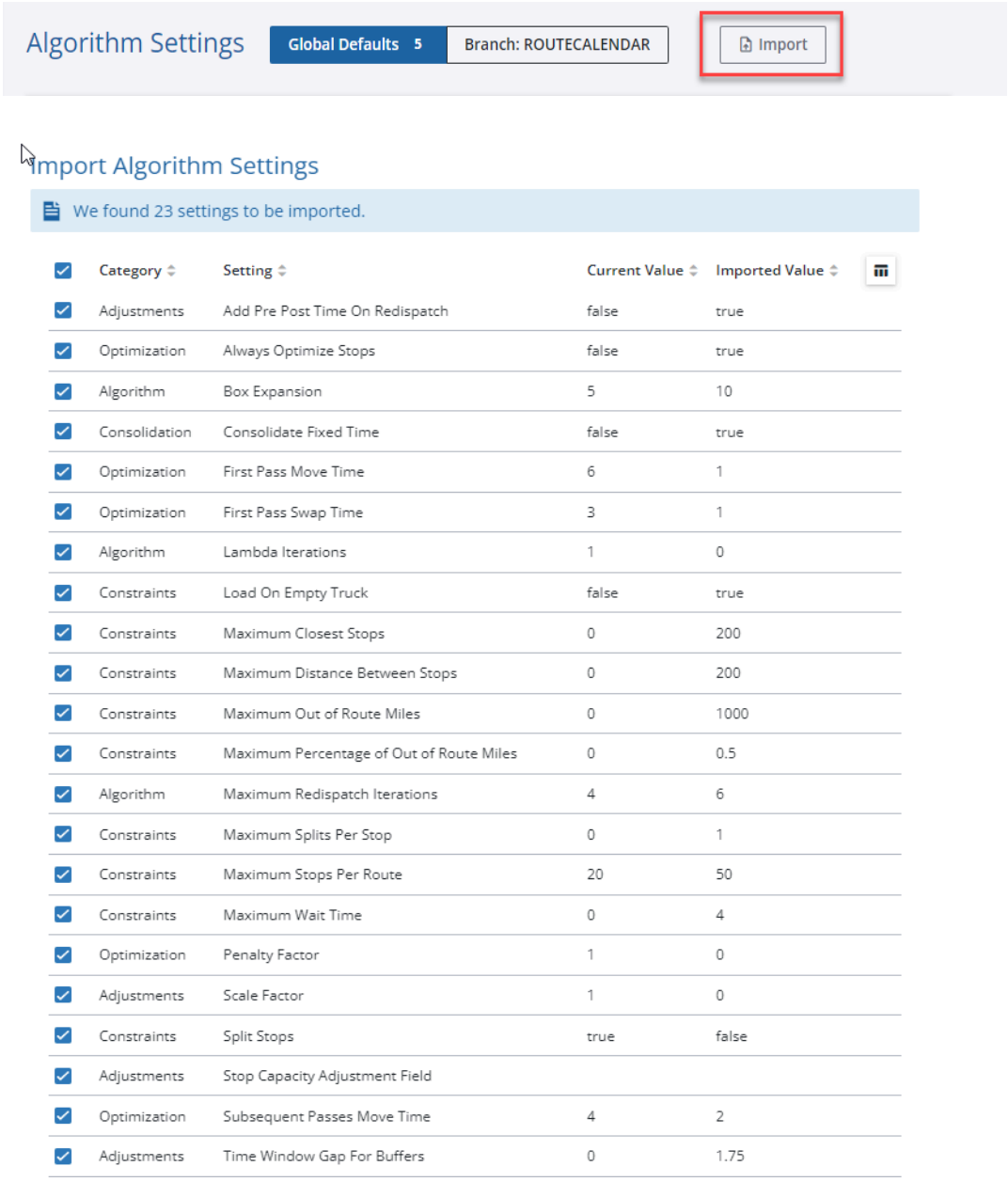




If you wish to return the setting to the default, choose the setting and click **Reset**.



If you are a current DirectRoute user, then the system can use a current *DRProject.config* file to set the algorithm settings. To use this feature, select the import button, and choose the DRProject.config file stored locally on a computer. You can select which settings you would like to set based on the file and click **Save**.



The settings inside each section are as follows:

- Adjustments
  - Speed Adjustment
  - Mileage Adjustment
  - Stop Capacity Adjustment
  - Rush Hour Distance
  - Scale Factor
  - Time Window Gap for Buffers
  - Add Turn Time
  - Add Pre/Post Trip Time on Redispatch
  - Drop Count
  - Stop Capacity Adjustment Field
- Consolidation
  - Consolidate By
  - Ignore EQCode
  - Consolidate Fixed Time
- Distances
  - Distance Method
  - Region
- Constraints
  - Maximum Distance Between Stops
  - Maximum Wait Time
  - Depot Radius
  - Check in Cone
  - Average Stops per Route
  - Minimum Time Between Stops
  - Maximum Closest Stops
  - Maximum Stops Per Route
  - Size Restriction Field
  - Dynamic Splitting
    - Split Trucks Full
    - Split Stops
    - Split Orders
    - Split Line Items
    - Split While Loading
    - Evaluate All Splitting Options
    - Maximum Splits per Stop
    - Minimum Split Size
  - Static Splitting
    - Split Stops
    - Split Orders
    - Split Line Items
    - Split size
    - Volume Field to Split
  - Backhaul
    - Maximum Out of Route Miles
    - Maximum Percentage of out of Route Miles
    - Load on Empty Truck

- Optimization
  - Minimum Cost Savings to Optimize
  - Time Limit
  - Penalties
    - Penalty Factor
    - Window Violation Penalty
    - EQCode Violation Penalty
    - Work Time Violation Penalty
    - Capacity Violation Penalty
    - Late Start Penalty
  - After Loading
    - Always Optimize Stops
    - Always Optimize Trucks
  - Advanced Settings
    - Level
  - Passes
    - Pass Limit
    - First Pass Move Time
    - First Pass Swap Time
    - Subsequent Passes Move Time
    - Subsequent Passes Swap Time
- Algorithm
  - Lambda Value
  - Lambda Increments
  - Strategy
  - Maximum Work Time Before Layover
  - Cone Angle
  - Box Expansion
  - Maximum Redispatch Iterations
  - Lambda Iterations

Consolidation Exception

Consolidation in Resource Calendar is not affected by the settings in the algorithm section described above.

- ConsFixedTm
- ConsolidateByAddress
- ConsolidateByID1
- ConsolidateByID2

To ensure consolidation works as expected, change the following INI settings in DRTrack.

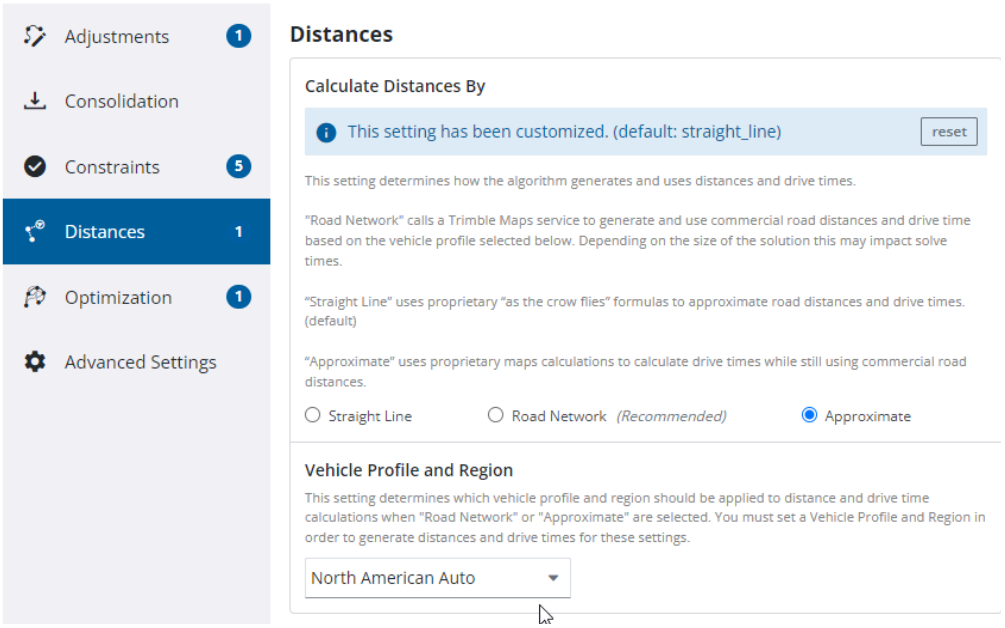
To set or update the settings, navigate back to DRTrack either through direct login or through the Bento Menu at the top of Resource Calendar. From DRTrack, click **Admin > Site > Settings and Configuration**, then search for **Consolidation**.

With all three toggled, orders with the same time window, eqcode, lat/long, earliest/latest date, and zone will be consolidated and the fixed times on all orders will be summed.

Distances

Distance calculation is extremely important for Resource Calendar's stop optimization algorithm to accurately weigh the best options. By default, the Resource Calendar uses the straight-line distance between locations for optimization.

Since Resource Calendar 24.1, you have the option to calculate much more accurate distances using Trimble Transportation's new **Ultrafast Distance Matrix (UDFM)**. UDFM not only allows you to generate distances in near real-time for a matrix of up to 50,000 by 50,000 locations, but it also can take into account the type of vehicle being routed and the worldwide region. As a result, distances and drive times are calculated based on safe and legal commercial vehicle routes.



Calculate Distances By

Distance calculation settings can be changed in **Preferences > Algorithm > Distances**. You can select one of three calculations that determine how the algorithm generates and uses distances/ drive times:

1. **Straight Line** — Uses straight-line distances and drive times for all calculations. This is the default setting.
    - Use with the Speed Adjustment settings — Does not work with *Road Network* or *Approximate*.

2. **Road Network** — Calls a Trimble Maps service to generate and use commercial road distances and drive time based on the vehicle profile selected. Depending on the size of the solution, this may impact solve times. Road Network is the recommended way to generate distances and drive times.
3. **Approximate** — Uses proprietary Maps calculations to calculate drive times while still using straight-line distances.

After selecting the distance calculation, select the **Vehicle Profile and Region** which you want to calculate. This setting adjusts the calculations when using the **Road Network** or **Approximate** distance calculation options listed above. This setting is required when using either of those options.

There are four options you can select from the dropdown menu. For additional info, click here.

- **EU Auto** — Passenger car
- **EU Heavy Rigid** — Vehicle with special body arrangements and / or equipment (12m L x 2.55m W)
- **EU Light Commercial** — Cargo or utility van (8m L x 2.4m W)
- **EU Midsize** — Box truck, City Delivery truck, Bucket or Beverage truck (10m L x 2.55m W)
- **North American Auto** — Passenger car
- **North American Heavy (53')** — Tractor Trailer with a Single Trailer (53’ L x 102” W)
- **North American Light Commercial** — Cargo or utility van (20’ L x 96” W)
- **North American Midsize** — Box truck, City Delivery truck, Bucket or Beverage truck (26’ L x 96” W)

If routes are built or edited outside of Resource Calendar, distances and drive times will default to using Straight Line calculations. Only routes built and edited in Resource Calendar can use Road Network calculations.

Default Vehicle and Navigation Settings

Default Vehicle and Navigation Settings are the base settings all routing and navigation will utilize. These can be overridden at the route level by clicking Vehicle and Nav Settings from the Route Card menu.

Apply Default Vehicle and Navigation Settings Automatically — When enabled, Default Vehicle and Navigation Settings will automatically be applied to all routes as a postprocess. Applying Vehicle and Navigation Settings automatically may impact build times.

Order Color Labels

Order colors can be set or passed over via the Color column in the database to display in Resource Calendar. While Resource Calendar has no color-picking functionality, any that were assigned to orders in that column will be displayed but in simpler colors.

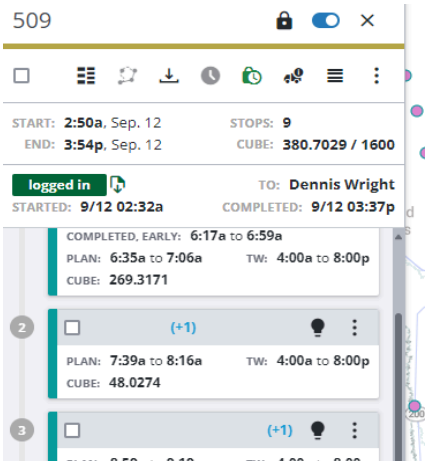
For example, if there were orders with similar shades of blue associated with them, Resource Calendar will display them as the same shade of blue. See the color chart below for the best approximation of colors and their new colors, along with the hex code of the new color.

If no colors were assigned, none will be assigned when passed into Resource Calendar. A color is assigned to consolidated orders only when one of the orders lacks a color. In such cases, a color from one of the other orders in the group will be applied.

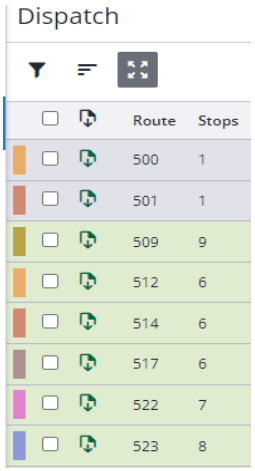
Use the table below for color approximations.

DR/DRT Color	New Color	Hex Code		DR/DRT Color	New Color	Hex Code
Aqua		#76BDF2		Lime		#FDF69E
Black		#000000		LimeGreen		#75C67D
Blue		#549ED6		Magenta		#95C885
Brick		#CF4932		Maroon		#DF84D0
Brown		#D28A6E		MediumBlue		#7F3542
Chocolate		#D2691E		Navy		#2E41AD
Crimson		#D13734		Olive		#333364
Cyan		#43C0CE		Orange		#5C9C63
DarkBlue		#23257A		Orchid		#EBAC63
DarkGray		#A9A9A9		PaleGreen		#DF84D0
DarkGreen		#385035		PaleTurquoise		#C0E2BF
DarkKhaki		#BDB76B		Peach		#AFEEEE
DarkOliveGreen		#556B2F		Pink		#FFB07C
DarkPurple		#7A3D7A		Plum		#8E98D8
DarkRed		#8B0000		Purple		#C883DE
DarkTeal		#004C57		Red		#D3332A
Fuchsia		#C883DE		RoyalBlue		#4169E1
Gold		#B5A53F		SaddleBrown		#7A4F48
Gray		#808080		Silver		#C0C0C0
Green		#75C67D		Teal		#009C9D
Indigo		#8E98D8		Turquoise		#77EDF0
LemonChiffon		#FDF69E		Violet		#8E98D8
LightBlue		#ADD8E6		White		#FFFFFF
LightCyan		#A1D6D6		Yellow		#B5A53F
LightGray		#D3D3D3		Silver		#C0C0C0
LightGreen		#AFE1AF		Teal		#009C9D
LightPeach		#FFD8B1		Turquoise		#77EDF0
LightPink		#FFD8B1		Violet		#8E98D8
LightViolet		#FFB6C1		White		#FFFFFF
LightYellow		#D6B4FC		Yellow		#B5A53F

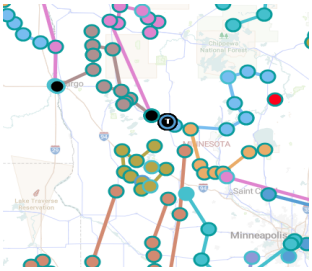
- Left edge of order card:



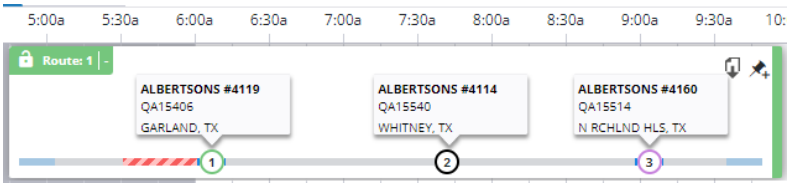
- Left edge of order grid row:



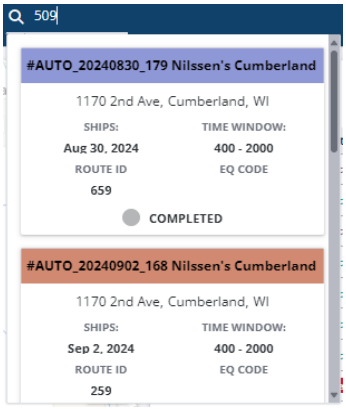
- Label outlines on maps on Resource Calendar, Boundaries, Dispatch, Fixed Routes pages:



- Order and stop dots on the Gantt chart:



- Order search results:



Resources

Related Documents

View additional Resource Calendar Documents here.

- Account Manager: Vehicle Routing Profiles
- ADP User Guide
- DRTrack User Guide
- PC*Miler Hazmat Routing
- PC*Miler Route Types
- Restful APIs Developer Guide
- Vehicle Routing Profiles

Helpful links

- Content Tools
- CoPilot Overview video

Support

- Support phone number: 1-800-663-0626
- Email: support@trimblemaps.com