



QUICK START USER GUIDE

Traction Travel

Traction Travel is a browser- and mobile-based, cloud hosted application that provides access to real-time, crowd-sourced travel time data for optimized travel performance.

This guide describes main concepts, vocabulary, and application functionality for an enhanced user experience.

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Introduction

What is Traction Travel?

Traction Travel is a web-based, cloud-hosted application that provides detailed travel time information, including real-time trends, heat maps, travel time vs. time of day graphs, threshold notifications, and traffic health over time.

How does Traction Travel work?

Traction Travel automatically collects crowd-sourced travel time data from Google, Azure, and Waze for any preconfigured user-defined route. Traction Travel provides 'Waze for Cities' program participants access to historical traffic alerts, irregularities, and traffic jams from Waze.

Traction Travel also includes a mobile application that allows users to perform travel time runs in the field, collecting second-by-second travel time data throughout the drive that can then be uploaded, viewed, and analyzed within the web application.

For more information, visit <https://www.kimley-horn.com/solutions/smart-cities/traction-travel/>

Key Features

Traction Travel is a powerful transportation analytical tool, designed to provide data and analytics to drive congestion improvements for municipalities and other government agencies. Leverage the mobile app to collect travel times for user-defined trips. Access this data along with crowd-sourced travel times and high-level performance measure indicators through your browser on the Traction website. Traction allows users to:

- Collect real-time location, speed, and heading information for a user trip through use of the mobile application.
- Collect crowd-sourced travel time data for any corridor of interest, up to once per minute.
- View analytical reports including travel time versus time of day and speed versus distance graphics.

Getting Started

New users may access Traction Travel by visiting the login page at <https://traction.kimley-horn.com/home> and using the credentials they receive in their introductory email.

To establish an account, please email traction@kimley-horn.com.

For more information, visit www.kimley-horn.com/traction.

How To Guide

Access the Mobile and Web-based Applications

Access the Mobile Application

1. Download the **Traction by Kimley-Horn app** from the Google Play or Apple App Store.
2. Launch the Traction application by selecting the icon from your mobile device.
3. The application includes a location-based map. A window may appear requesting permission for the application to access the user's location; if this occurs, select the "Always Allow" option.
4. Enter your Microsoft credentials when prompted.

Access the Web-based Application

- Using Chrome, browse to the Traction website at <https://traction.kimley-horn.com/> and enter your Microsoft credentials.

Trajectory Data | Trips

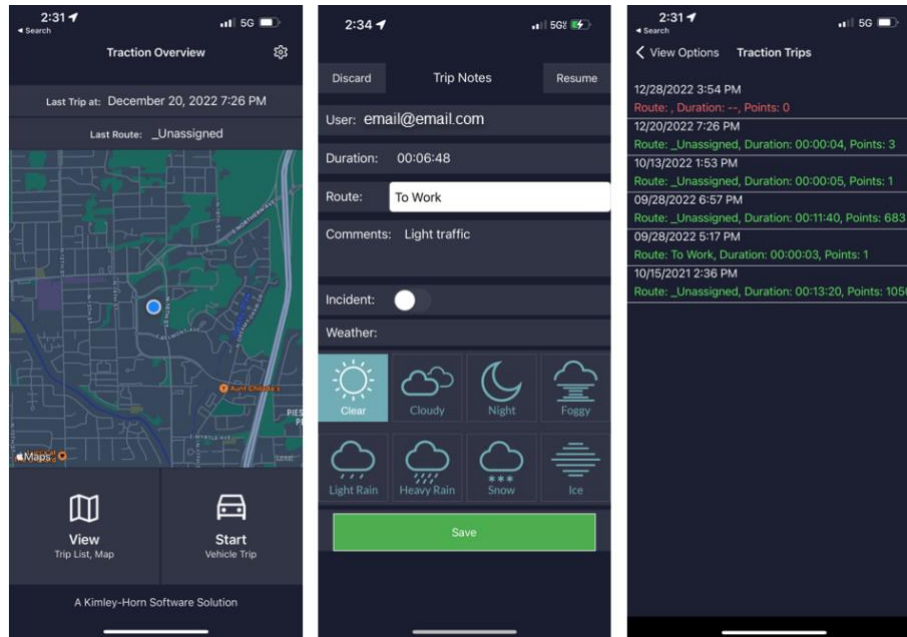
Use the Traction mobile app to record user trips and view key trip information. Additional viewing is available through the website.

***Warning:** Do not use the app in any way that distracts you or prevents you from obeying traffic or safety laws. Additional data points captured getting to and from your parking locations can easily be trimmed from the desired route through our online tools.*

Record a User Trip

1. While the vehicle is in park, select "Start". The application will immediately begin collecting trip data. No further interaction with the app is needed for the duration of the route.
2. Drive the desired travel time route, travel through the last desired location, and safely navigate to a parking location.
3. Once parked, select "Stop". Add any relevant trip details, including route name, and select "Save" to commit the data. To cancel the trip, select "Discard".
 - If a user selects a route, automatic trimming of the trip data occurs. If a user doesn't select the route driven at this step, no trimming to the data will occur, even if applying the data to an existing route at a later period.

- Any selected routes are directional. If a user is going back and forth on travel time runs, the user will have to pick a different route and save after each trip.



Recording a Trip Screenshots

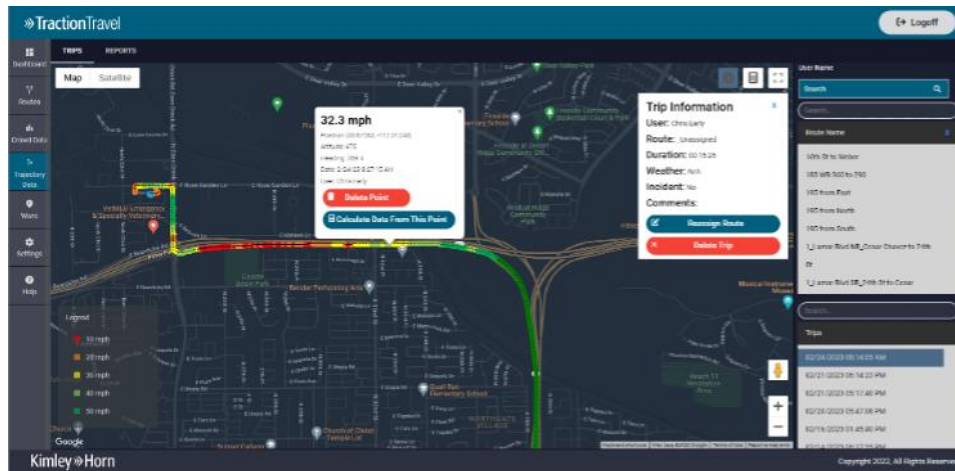
View a User Trip (Mobile App)

1. Select “View”, then “Trip List”. A list of the trips recorded with the current device’s user trips will be displayed with the date, time, route, duration, and points.
2. Tap any trip to view further details. The resulting screen presents summary statistics. The screen also has options to view the trip in a Speed vs Time graph or view a color-coded Map view of the trip, as well as an option to delete the trip.
3. Use the back arrow in the top left to navigate to the previous page.
4. Deleting a previous trip can also be done directly from the Trip List, by swiping left on the specific trip and tapping the resulting Delete button.

View a User Trip (Web-based App)

Map View

1. Navigate to the **Trajectory Data** tab.
2. If desired, use the User Name dropdown and Route Name list to filter the list of Trips shown. To remove the User Name filter, select the None option at the top of the list. To remove the Route Name filter, click the X in the top right of the list box.



Trajectory Data | Trip List

3. Select a trip from the Trip list. The user trip is displayed on the map, color-coded by speed based on the legend shown in the lower left.
4. A label with exact speed, position and other detailed information can be displayed by clicking on any point along the route.
5. Trip information such as total duration, weather, and comments can be viewed by clicking on the information button in the top right of the map view. Since filtering on user and route is optional, this popup also displays the user and route names.

Point to Point Travel Times

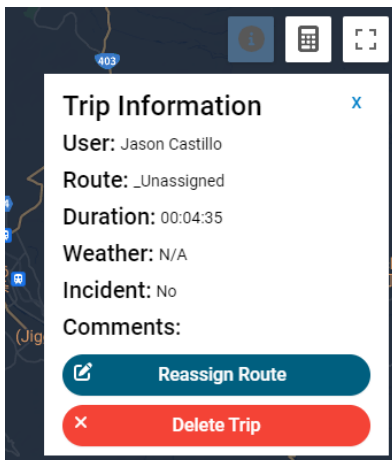
Travel times between user-selected points can be dynamically calculated while viewing the map view. To do so, use the web version, select the Trips tab from the Trajectory Data screen and complete the following steps:

1. Click on a point along the route, and then select “Calculate Data From This Point” button on the popup.
2. Click on a second point and select “Calculate Data To This Point” on the popup.
 - The second point must be ahead of the first point in terms of the trip.

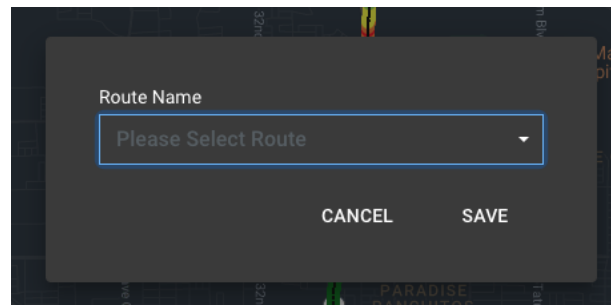
3. A window in the upper right will display the selected coordinates along with the distance, time elapsed, and average speed.
4. To calculate travel times with entirely different points, click the “Clear” button, then select new points on the map. To repeat the calculations with one different origin or destination, use the red circle with a minus sign to remove the origin or destination, then click on the new point on the map.
5. To hide the results, click on the calculator button above the results or the “x” in the upper right corner of the window.

Reassign User Trips

1. Select a trip
2. Click the Trip Information button (button with a circle and a ‘i’ in the center of it)
3. A window in the upper right will display.
4. Select **Reassign Route** button
5. Select the route from the **Route Name** dropdown
6. Click **Save**



Reassign Route Button



Route Name Drop Down

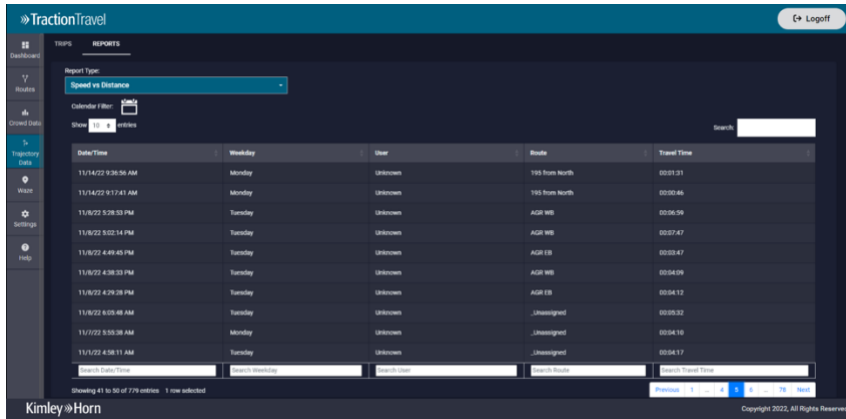
Trajectory Data | Reports

Use the Traction website to generate reports with User Trip data.

View Trajectory Data Reports

1. Navigate to the **Reports** tab, and select a **Report Type** near the top left of the screen.

2. Select the desired trip(s) from the table and select **View**. The Speed vs Distance graph is generated.
3. To view route segment analysis, trip buffered index, and planning index, select multiple trips of the same route and click **View Multiple**.
4. Select **Export Data** to receive an Excel (.xlsx) file second by second speed and GPS data, time elapsed/speed data, and a Speed vs Time Chart of the selected trips.



Reports View Table



Option to Export Data in different formats

Routes

Use the Traction web app to create routes for User Trip and Crowd Data collection.

Warning: Creating a route does not initiate travel time data collection. Data collection settings are required. Please see the Crowd Data section, below.

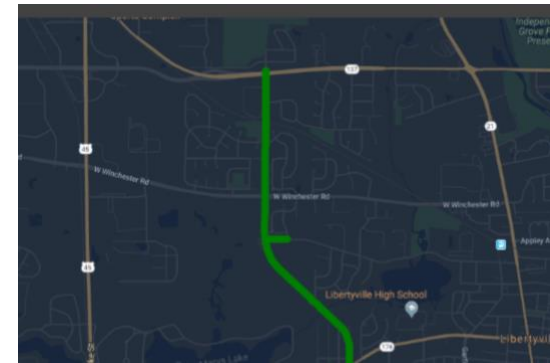
View Current Routes

1. Navigate to the **Routes** tab. Existing routes are displayed on a map and listed at the right. Route start points are indicated by a circle while route ends are marked by an arrowhead.
2. Select any route from the list at the right to show only that route on the map.
3. Toggle **Check Azure Routes** to view current level of delay for routes on the map.
 - o Current level of delay is a percentage based on the current travel time and the free flow travel time between waypoints.
 - o Green = 0% to 30%, Yellow = 30% to 60%, Red = 60% to 90%, Deep Red = greater than 90%

Considerations for Route Creation

Routes are used in nearly all aspects of Traction. The following are some points to keep in mind for overall organization, user reports, and crowd data reports.

- **Organization** | Having a clear and consistent pattern for naming routes can be helpful when viewing a long list of routes. Consider identifying the major road, direction of travel, and the start and end boundaries.
- **Tags** | can be assigned to routes, and then used for filtering lists of routes such as on the Crowd Data page. Tags for each agency user are provided by default, and custom tags can be created and organized in a folder-like structure.



Route Example on Map

Reports from User Trips (Mobile App Data)

- **Route Waypoints** (any pins between the origin and destination) | used to break the trip up for node-by-node analysis reporting.
- **Street Names of Route Waypoints** | can be displayed on the user trip report graph and are used in node-by-node analysis reporting. Consider revising the default names when creating a route – for example, a numeric street address may not be as helpful as the cross streets of an intersection.
- **Speed Limit Along Route Segments** | used to calculate node-by-node delay. Speed limits default to 35 mph unless the user modifies them.

Crowd Data

- **Route waypoints** | used in multiple ways in the Crowd Data module.
- **Fastest Route or Fixed Route** | Some data sources may provide the travel time for the fastest path between the specified points. Defining just an origin and destination may collect data from a route other than the one shown when creating the route, if an alternative is the fastest option. Adding waypoints helps ensure the travel time is for a specific path.
- **Segments on View Playback** | The Crowd Data reports for Azure data include images of the data as a color-coded route, reflecting the level of delay along each segment. The granularity is determined by the waypoints: a route with just an origin and destination is a single segment and would be displayed as a single color. Adding waypoints can help examine subsections of a corridor. This feature is only applicable to Azure data.

Data Sources and Location Positioning

Crowd data sources can be sensitive to location positioning. Different data sources may interpret the same GPS coordinates as being in different locations, especially on divided roadways, near frontage roads, or near intersecting streets. This can lead to driving

directions involving unintended paths, such as U-turns to access the other side of a divided roadway or jogging briefly onto a side street before returning to the main road. Viewing an image of the route is an effective way to identify and resolve these issues.

The website uses a Google Maps visualization when creating a route, providing immediate feedback on Google's interpretation of the selected GPS coordinates. If a route will collect Azure data, click the Use Azure Definition to get immediate feedback from Azure. See the Crowd Data – View Congestion Map Playback section for more details on this feature.

Create a New Route

1. Navigate to the Routes tab.
2. Select "New" to create a new route.
3. Enter a route name. You may want to include the direction and route boundaries in the route name (e.g. NB Central Ave from Jefferson to Roosevelt).
4. Zoom and pan to the desired area.
5. Select the pin icon and click the start point of the route. (Alternatively, add points with a right-click on the desired location)
 - When adding pins, it is recommended to zoom in as far as possible on the map to ensure accuracy.
6. Reselect the pin icon and click additional waypoints along the route. The last selected point will become the end point of the route.
7. Waypoints can also be inserted along the existing route: Toggle **Show Vertex Points** to on, right click on one of the white dots along the route, and select **Add Waypoint** to add a waypoint at the selected location.
8. If the route will be collecting Azure crowd data, toggle **Use Azure for Definition**, otherwise the definition shown will be for Google crowd data.
9. Toggle **Check Azure Route** to view current level of delay for route on the map.
10. Once finished with the route, select "Save". If a route in the opposing direction is desired, repeat the process to create a new route.

» TractionTravel ↔ Logoff

DEFINITION CROWD DATA

Route Name: IL 64 (North Ave) Eastbound Waze Name:

Locations

Map Satellite Show Traffic

(7)	41.902086	-88.10184	Schmale Rd	5285	35
(8)	41.902726	-88.08202	Bloomington Rd	5358	35
(9)	41.903314	-88.06309	Glen Ellyn Rd/N Main St	7123	35
(10)	41.904046	-88.03801	I-355	1362	35
(11)	41.904266	-88.03250	N Columbine Ave/N Rohlwin	6302	35
(12)	41.904826	-88.00797	N Grace St	5830	35
(13)	41.905226	-87.98830	N Addison Rd	6368	35
(14)	41.905696	-87.96497	IL 83 (Kingery Hwy)	6844	35
(15)	41.906226	-87.94000	N York St	4488	35
(16)	41.906436	-87.92355	I-290	1027	35

Use Azure for Definition
 Check Azure Route
 Show Vertex Points

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Route Creation

Note: Careful use of waypoints ensures the travel time data is collected for the specified route. The recommended number of waypoints generally increases with route length, but also relates to the type of road and environment. For example, a 5 mile stretch of interstate without any exit ramps does not need multiple waypoints, because there is no opportunity to deviate from that route. A single mile in an urban area has more potential alternative paths, so additional waypoints should be used if a specific path is desired. Credits used to collect crowd data is **not** based on the number of waypoints a route has. Also worth noting that data collection becomes buggy after a route is using about 26 waypoints when collecting using Azure data. For a rule of thumb, have 25 be the maximum number of waypoints that a route can have.

Waze Routes

Agencies who participate in the Waze for Cities program may be able to integrate their Waze data to collect route-based travel time information. After configuring a route in the Waze website, it may be linked to Traction by typing the exact route name in the Waze Name field when creating or editing a route.

Please contact us for more information on setting up Waze integration.

Edit a Route

1. Navigate to the **Routes** tab.
2. Select a route from the list and select "Edit".

Edit a point location

1. Click and drag any existing pin to move the waypoint location.
2. Save the route.

Delete a point

1. Right click any point and select "Delete" to remove that point.
2. Save the route

Edit the street name

1. Street names will automatically be suggested for each point. Street names are used in some of the Trajectory Data reports. Enter the desired description.
2. Save the route.

Edit the route name

1. After adding points on the map, enter a route name.
2. Save the route.
3. If a name is not initially entered, it will be automatically suggested based on the first selected points.

Tags

Tags are used to organize and filter routes from the Crowd Data page. A common use case is to tie certain routes to certain regions, projects, or users. This allows users to click filter on the Crowd Data page, and then select a tag, and the table on the crowd data page will only show you routes associated with the selected tags.

Tags are either *Parent* tags or *Child* tags. Parent tags can house child tags. When filtering on a parent tag, all child tags will be selected. Child tags cannot parent other child tags.

1. Navigate to the **Routes** tab.

2. Select a route to add a tag to
3. Select **Edit**.

Add a tag to a route

1. Select **Tags**
2. Check the desired tag(s)
 - o Routes can have any combination of parent and child tags.
3. Click **Save**

Create a new tag

1. Select **Tags**
2. Select **Add New Tag**
3. Enter the name of the tag
4. Selecting a parent tag is optional, and will turn the tag into a child tag.

Rename a tag

1. Select **Tags**
2. Select **Rename Tag**
3. Enter the new tag name
4. Select the old tag from the dropdown

Delete a tag

1. Select **Tags**
2. Select **Delete Tag**
3. Select the tag to be deleted
4. Click the **Delete** button

Preset Schedules

1. Navigate to the **Routes** tab.
2. Select **Preset Schedules** near the top of the routes view.
3. Displayed is a table of all the preset schedules that have been created for the user's agency.

- Table is sorted alphabetically by Preset Schedule Name and displays the first row (schedule) of the preset. To potentially see more rows (schedules) within a preset, select a preset, and select **Edit**.

Preset Schedule Name	Day(s) of Week	Data Source	Frequency (in mins)	Start Time	End Time	Start Date (optional)	End Date (optional)
AM Peak	S M T W Th F Sa	Azure Google	15	06:00am	09:00am		
Azure 5 minute peak - TWTh Sa	S M T W Th F Sa	Azure Google	30				
Azure and Google Off-Peak - December	S M T W Th F Sa	Azure Google	30	12:00am	11:59pm	12-03-2021	12-16-2021
CMPs	S M T W Th F Sa	Azure Google	30	05:00am	09:00pm	04-27-2020	05-15-2020
Dual sources	S M T W Th F Sa	Azure Google	30				
MD Peak	S M T W Th F Sa	Azure Google	30	09:00am	03:00pm		
NJDOT August 2022 Collection	S M T W Th F Sa	Azure Google	5	12:00am	11:59pm	08-06-2022	08-15-2022
NJDOT August 2022 route 10	S M T W Th F Sa	Azure Google	5	12:00am	11:59pm	08-06-2022	08-15-2022
Overnight	S M T W Th F Sa	Azure Google	60	07:00am	06:00am		
PM Peak	S M T W Th F Sa	Azure Google	15	03:00pm	07:00pm		
Salt Lake City Demo	S M T W Th F Sa	Azure Google	30				
Surprise All Day	S M T W Th F Sa	Azure Google	30	04:00am	08:00pm	09-08-2020	

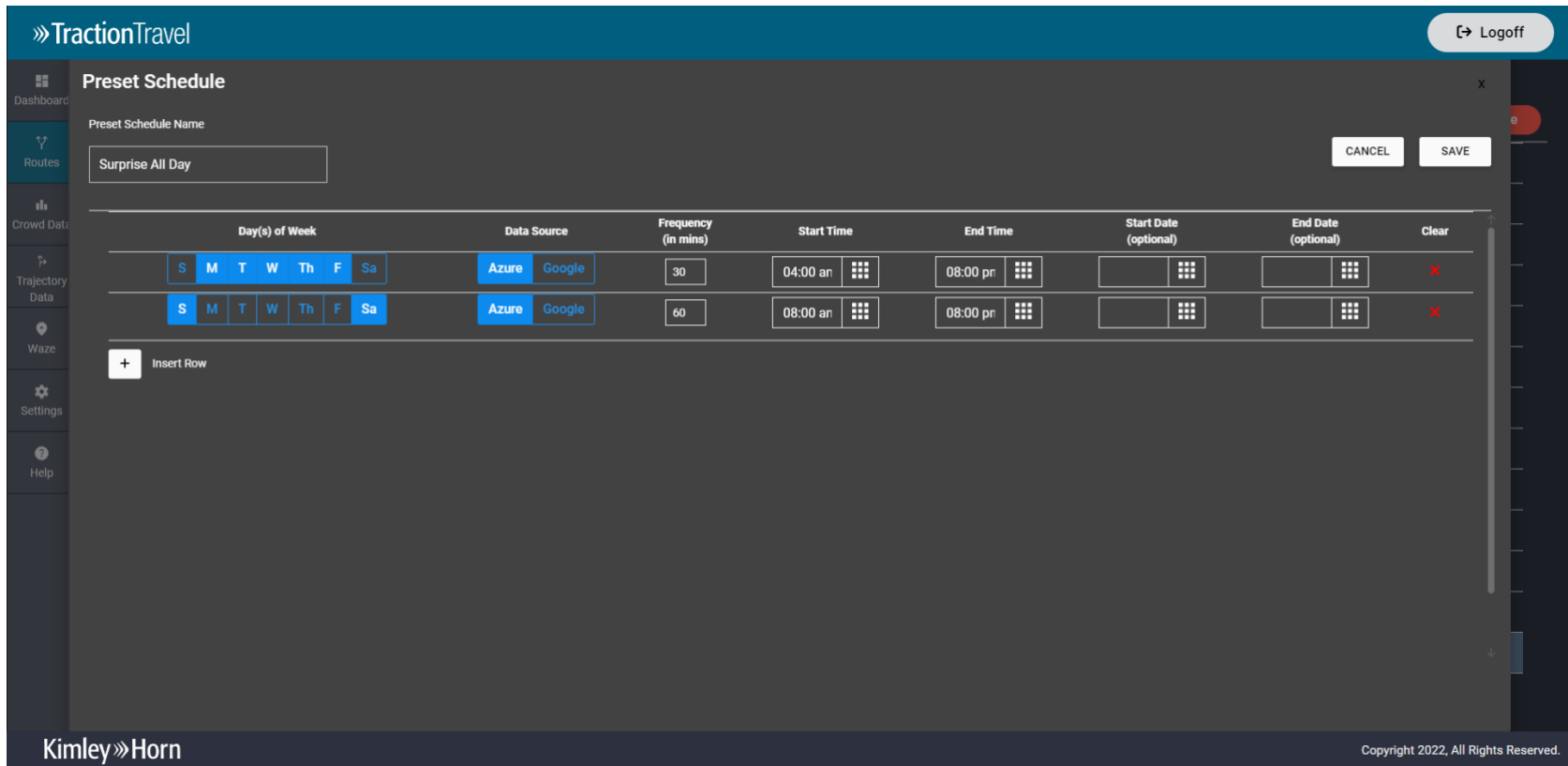
Preset Schedules Table

Create a new Preset Schedule

1. Select **New**
2. From the Preset Schedule view, give the preset schedule a name
3. Select **Insert Row** to add a schedule.
4. Select each day of the week that the user would like to collect data.
5. Select the data source that the user would like to use to collect data (Azure and/or Google).

Note: agencies participating in the Waze Connected Citizens Program (CCP) may see an option for Waze data source. Please be aware that the Traction route must be linked to a Waze route in order to actually collect Waze data. See the Waze Routes section for more information on linking Traction and Waze routes. Contact us for more information on integrating Waze with Traction.

6. Select the frequency of how often the user would like to collect data within the time and date constraints (e.g. every 15 minutes).
7. Select the start and end times for data collection.
 - o **Note:** *Start and end times spanning midnight will wrap to the following weekday. For example, a schedule from 9 pm to 5 am on Friday will collect late night data on Friday and early morning data on Saturday.*
8. If desired, use the Start Date field to delay data collection until the specified date.
9. If desired, use the End Date to set a date for data collection to end.
10. For different collection frequencies, times of day, or days of week, add additional rows to your schedule as desired.
11. To remove a row, click the red 'X' under the clear column.
12. When done generating the schedule, click **Save**.



Preset Schedule Creation

Edit a Preset Schedule

1. Select a preset from the preset table and then select **Edit**
2. From the view, the user gains the ability to change the preset name, days of the week for collection, data source, frequency of collection, start time, end time, start date, end date, as well as add a new collection schedule within the schedule by clicking Insert Row.
3. When done editing the schedule, click **Save**.

Copy a Preset Schedule

1. Select a preset from the preset table and then select **Copy**

2. This will open the view to create a schedule, with the selected schedule's day(s) of week, data sources, frequency, start/end time, and start/end date inputted for the new schedule.
 - This allows the user to potentially save time when creating a schedule, by copying a similar schedule, and making adjustments.
3. Give the new schedule a name.
4. When done generating the schedule, click **Save**.

Crowd Data

Use the Traction website to configure automated collection of end-to-end travel times for a given route.

» TractionTravel Logoff

Dashboard Routes Crowd Data Trajectory Data Waze Settings Help

Search Route FILTER

	Route Name	Data Sources	Last Collected	Created by	Next Collected
●	Parmer Ln SB	N/A	11/5/19 3:30 PM CST	Malorie Meyers	
●	Parmer Ln SB to McNeil WB	N/A	11/5/19 3:30 PM CST	Malorie Meyers	
●	Pinnacle south	Azure	3/6/23 9:00 AM US MST	Jason Castillo	3/7/23 6:00 AM US MST
●	Pinnacle West	Azure	3/6/23 9:00 AM US MST	Jason Castillo	3/7/23 6:00 AM US MST
●	PLA Preston Rd NB Frankford to Park	Azure	3/6/23 11:30 AM US MST	Unknown User	3/6/23 12:00 PM US MST
●	PLA Preston Rd SB Park to Frankford	Azure	3/6/23 12:30 PM CST	Unknown User	3/6/23 1:00 PM CST
●	Preston Rd NB	Azure	3/6/23 12:30 PM CST	Malorie Meyers	3/6/23 1:00 PM CST
●	Preston Rd SB	Azure	3/6/23 12:30 PM CST	Malorie Meyers	3/6/23 1:00 PM CST
●	Priest South Broadway to Ray	N/A	10/28/21 3:30 PM US MST	Jason Castillo	
●	Ridge Rd/Laurence Dr NB	N/A	11/12/21 6:00 PM CST	Malorie Meyers	
●	Ridge Rd/Laurence Dr SB	N/A	11/12/21 6:00 PM CST	Malorie Meyers	
●	Rutherford 231 to 70S	N/A	4/8/21 5:00 PM CST	Unknown User	

Showing 1 to 208 of 208 entries 1 row selected

Quick View

Map Satellite

Configure Reports Edit Route

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Crowd Data Table

Edit Crowd Data Collection Settings

1. Navigate to the **Crowd Data** tab.
2. Select the desired route. The map will update to show the selected route. Click the “Configure” button below the map.

Capture Information

Traction allows detailed customization of data collection. For example, data could be collected every 10 minutes during peak weekday periods, every 30 minutes during off-peak weekday periods, and not at all on weekends. The data source(s) can be selected, and each data source could have the same or distinct collection schedules.

Data collection can also be scheduled to start and end on certain dates, or to continue indefinitely.

Types of data collection schedules

- **None** | Data collection for the chosen route is not collecting any data.
- **Preset** | Data will collect at the dates, times, and duration from the selected preset(s).
- **Custom** | Select to create a data collection schedule unique to the selected route.

Setting up data collection for a route using preset schedules

1. Select **Preset**
2. Check each preset from the list of preset schedules
3. To view the schedule attached to a preset, click the magnifying glass next to preset.
4. From the preset schedule view, click **Edit** to gain the ability to change the preset name, days of the week for collection, data source, frequency of collection, start time, end time, start date, end date, as well as add a new collection schedule within the schedule by clicking Insert Row. If changes are made to the preset schedule that are wished to be kept, click **Save**.
5. Click **Save** from the configuration view to start collecting using checked preset schedule(s).

Setting up or editing data collection for a route using a custom schedule

1. Select **Custom**
2. From the New Custom Schedule view, select **Insert Row** to add a schedule.
3. Select each day of the week that the user would like to collect data.
4. Select the data source that the user would like to use to collect data (Azure and/or Google).

Note: agencies participating in the Waze Connected Citizens Program (CCP) may see an option for Waze data source. Please be aware that the Traction route must be linked to a Waze route in order to actually collect Waze data. See the Routes, Create a New Route section for more information on linking Traction and Waze routes. Contact us for more information on integrating Waze with Traction.

5. Select the frequency of how often the user would like to collect data within the time and date constraints (e.g. every 15 minutes).
6. Select the start and end times for data collection.

Note: Start and end times spanning midnight will wrap to the following weekday. For example, a schedule from 9 pm to 5 am on Friday will collect late night data on Friday and early morning data on Saturday.

7. If desired, use the Start Date field to delay data collection until the specified date.
8. If desired, use the End Date to set a date for data collection to end.
9. For different collection frequencies, times of day, or days of week, add additional rows to your schedule as desired.
10. To remove a row, click the red 'X' under the clear column.

11. If desired to save the schedule as a preset, check **Save as preset schedule** and enter a preset name in the text field to the right of the checkbox.
12. When done generating the desired schedule, click **Save**.
13. Click **Save** from the configuration view to start collecting using the generated custom schedule.

To end existing data collection

1. Select **None**
2. Click **Save** from the configuration view to disable data collection.

Automated Reports (Optional)

1. Select the frequency (daily or weekly) and the recurrence pattern.
2. Enter email address(es) of where the email reports should be sent to.
3. Click **Save** from the configuration view to have automated reports sent to the inputted email addresses.

User Threshold Alerts (Optional)

1. Check the travel time exceeds checkbox for alerts when route travel goes beyond the inputted duration of minutes.
2. Check the travel time exceeds ideal duration checkbox for alerts when a route goes beyond the data sources "ideal" duration by the inputted duration of minutes.
 - o The data sources "ideal" duration is variable based on the day of the week and time of day. For example, that ideal time will most likely be greater on a weekday at peak hours, versus a weekend in the middle of the night.
3. Enter an email address or phone number of where to send the alerts. Enter multiple email addresses or phone numbers by separating them with a semi-colon.
 - o *Note: For phone numbers, don't include any formatting. Example 5551234567.*
 - o The last email address or phone number entered should not have a semi-colon at the end.
4. Check **Notify me only at the start and end of overage event** to receive an email at the first collected overage, and the first observed non-overage time.
 - o *Note: If not checked, the alerts will be sent for each collected overage time based on the data collection schedule. For example, if a route is scheduled to collect data every 15 minutes, and for each the next four collected times there is an overage, there will be alert sent every 15 minutes, four times, until the threshold is no longer met.*
5. Click **Save** from the configuration view to have user threshold alerts sent to the inputted email addresses and/or phone numbers.

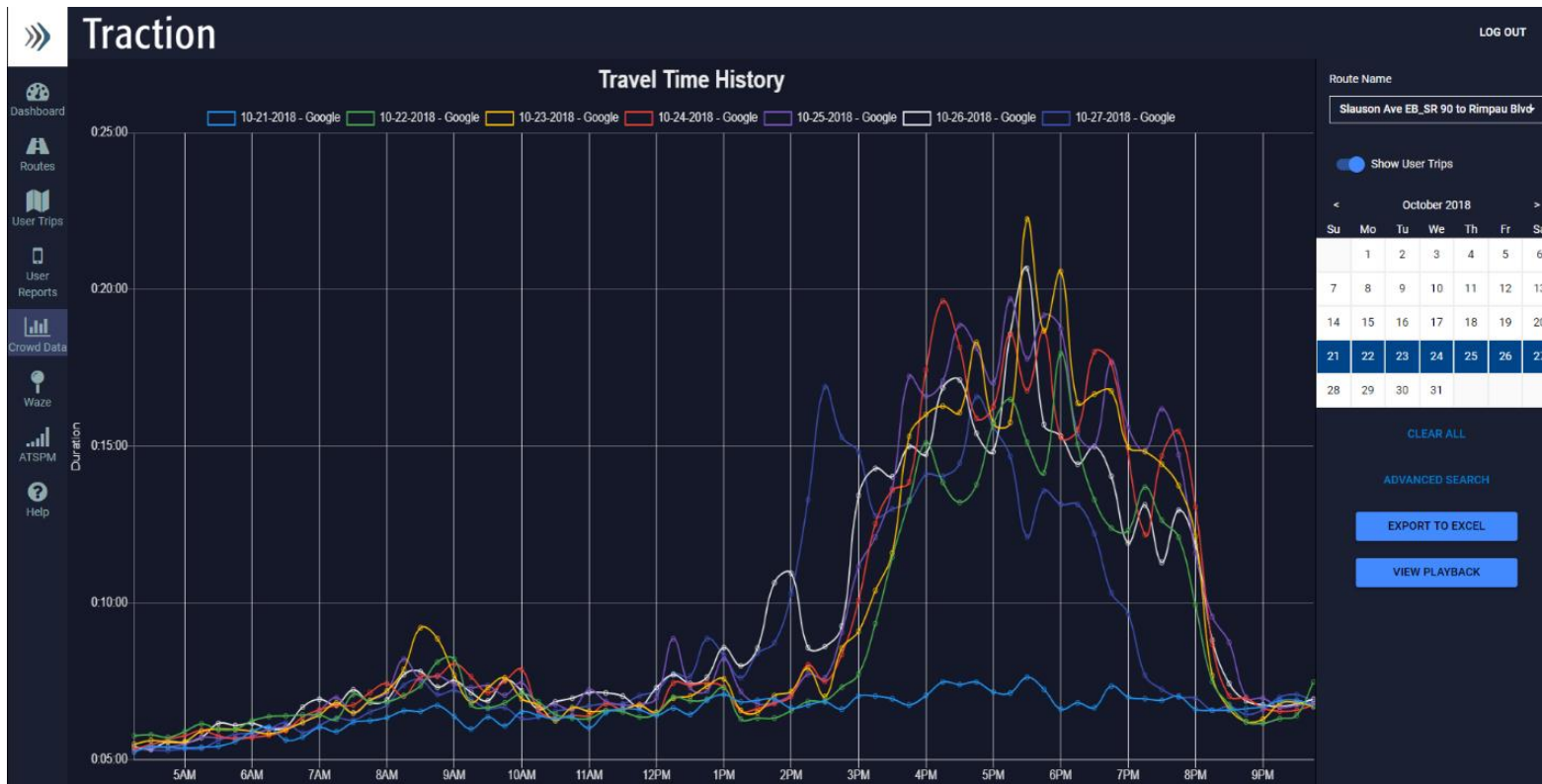
View Travel Time History Reports

1. Navigate to the **Crowd Data** tab.
2. Filter the table of routes [optional] (See Tag Section)
 - To filter routes, select **Filter**.
 - Select the tag(s) to filter on.

- Select **Clear** to remove all selections
 - Click the **X** to close filter window.
3. Select the desired route, then click the **Reports** button below the map.
 4. Select dates to be displayed on the graph. Use the arrows to toggle between months. Alternatively, use the **Advanced Search** feature, described in the next section.

Note: Dates grayed out have no data available, either because the collection was not set-up for these days or that the date is in the future.

5. To remove a date, click it again. Clear all the dates by selecting **Clear All**.



Crowd Data | Travel Time History for specific route

Note: The graph centers itself on the selected days of data, so the travel time axis may not begin at zero and the time of day axis may not show 24 hours.

Advanced Search

This feature helps to quickly identify days with high travel times, view data over large time periods, or select dates on a specific day of week.

1. Within the **Crowd Data – Reports** page, click on **Advanced Search**, below the calendar.
2. Select a Start Date and an End Date.
3. If desired, limit the times of day which will be shown on the graph using the Start Time and End Time.

4. Look at the Days of Week boxes and click the boxes to enable or disable days as desired.
5. To identify a specific number of days with high travel times, check the box by “[10] days with highest average travel time”, and type in the desired number of days. *The Start Date, End Date, and Days of Week filters apply to this search.*
6. To select all dates within the range which go above the user-defined Threshold for the route, check the box for “Only days exceeding travel time Threshold” *Thresholds are set by each user for each route in the Crowd Data – Configuration page. Because thresholds are defined for each user, this search feature is not available if the user does not have a threshold for the current route, and users with different settings may see different results.*
7. Click **Apply**

Toggle Data Sources

The Calendar date picker will select all available data for the dates. For routes which use multiple data sources, this results in multiple graph lines per day. A user can hide specific days and sources of data by clicking on the label in the legend. The line will disappear from view, and there will be strikethrough in the legend entry.



Crowd Data | Travel Time History for route, shows how hidden information will display

Note: The legend entry for 2-20-2023 - Azure has strikethrough, meaning that data is available for this route but is hidden from the current view.

Export Data to Excel

After selecting the desired days in the calendar, the data can be exported to excel by clicking the button below the calendar. The resulting file will have the route name and date of export in the file name.

The exported file includes:

1. A graph of the selected data
2. A heat map of the travel time data that includes conditional formatting, highlighting longer traffic times in red and lighter traffic times in green
3. The travel time data without conditional formatting

View Congestion Map Playback

Routes collecting **Azure** data can indicate where, relative to the user defined route waypoints, delays occur along the route. Congestion map playback is not available for Google or Waze data.

1. Navigate to the **Crowd Data** tab.
2. Select **Reports** for the desired route.
3. Click the **View Playback** button
 - i. If one or more dates are selected, the playback feature will open with the more recent selected date.
4. Select a Start Date and click the triangular Play button below the map.
 - ii. Click along the playback bar to see the delay at a particular time of day

Interpreting the Graphic

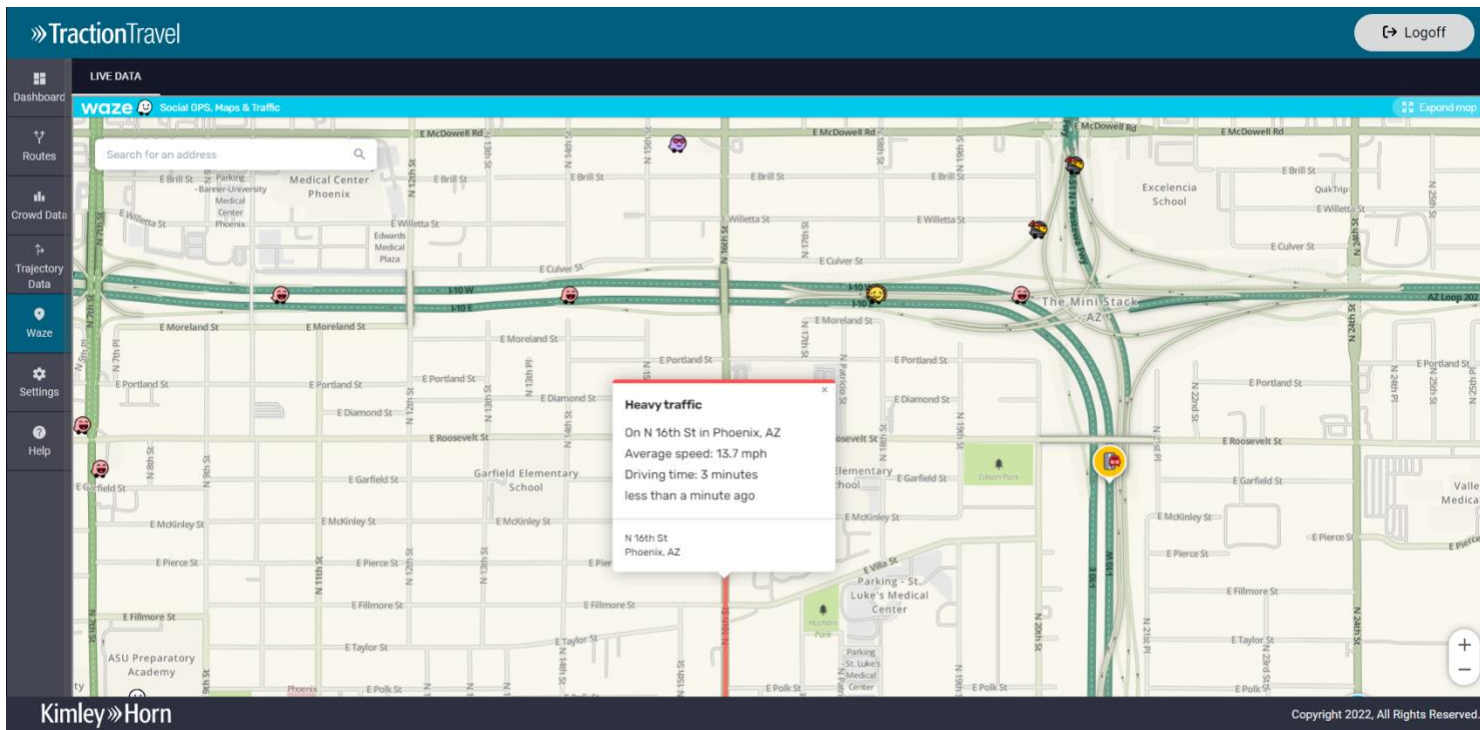
- **Colors** | A green-yellow-red color coding is used, where green reflects little to no delay, red indicates significantly slower than usual traffic, and yellow is in the middle. Delay is based on the relative increase in travel time, or percent of free flow travel time.
 - Green = 0% to 30%, Yellow = 30% to 60%, Red = 60% to 90%, Deep Red = greater than 90%
- **Subsections** | A delay is evaluated and shown between the user-defined route waypoints. If the route was created with just an origin and a destination, the entire path would always be a single color, regardless of the length of the route. The data is saved using then-current waypoints. Changing the route waypoints now will affect future data collection, but it does not impact how historic data is analyzed and displayed.

Congestion Map Export

Exporting from the congestion map generates an xlsx file of actual travel times between each user generated segment of the route at the collection times on the selected date. Will include the free flow travel time of the segment, and as well as if there are any delays due to incidents.

Waze Map

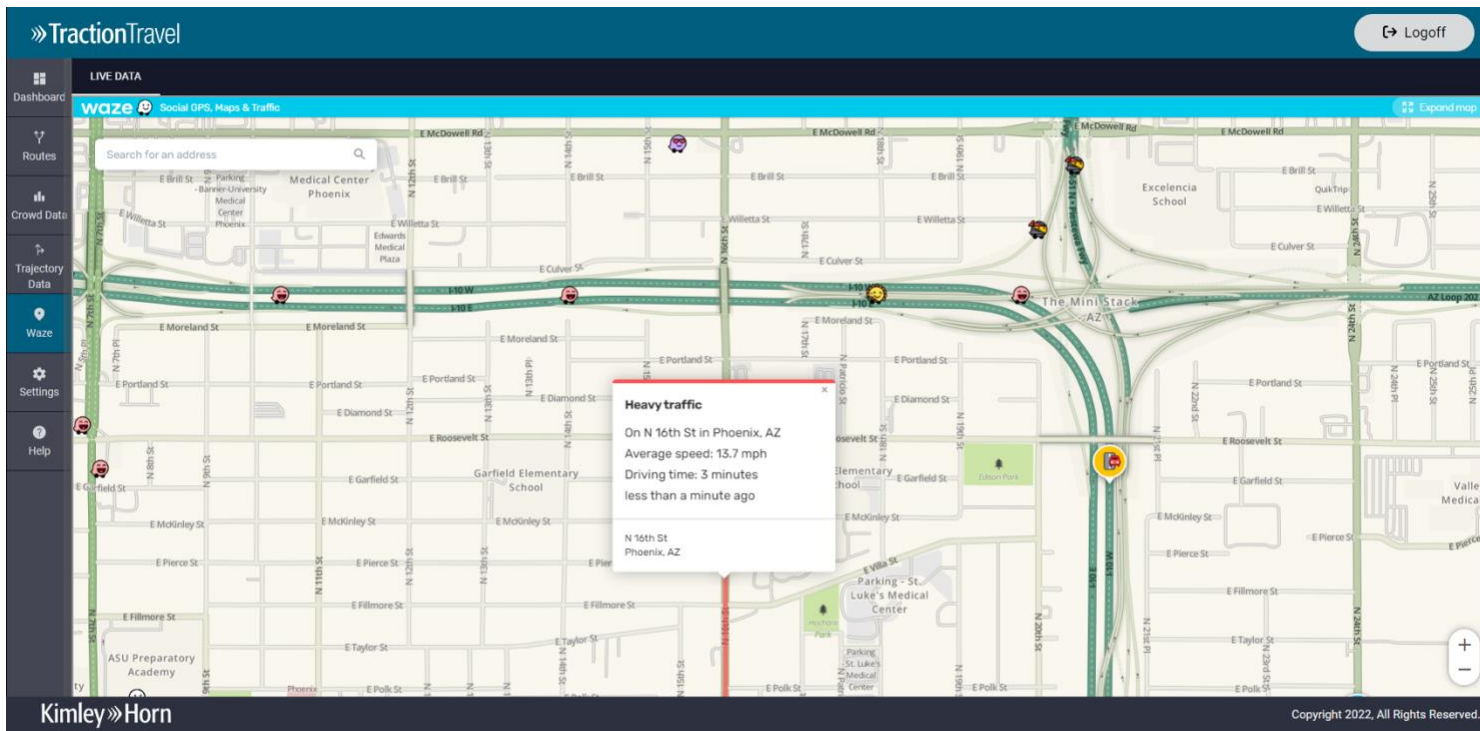
Use the Traction website to view an integrated Waze map including details on traffic conditions and incidents. Additional features are available for agencies that are part of the Waze for Cities program.



Waze | Live Data view displays Traffic Congestion Information

View Traffic Congestion Information

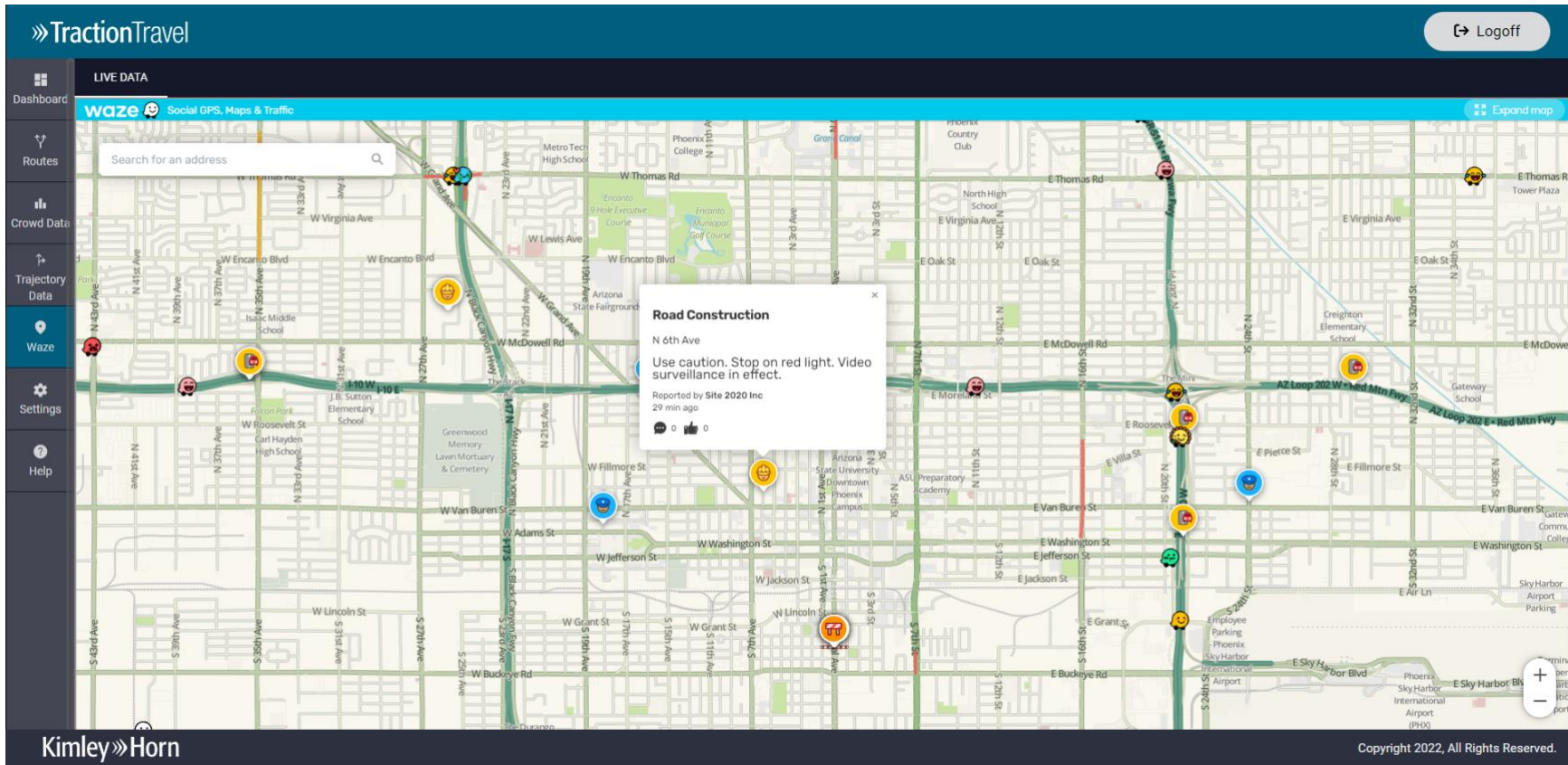
1. Navigate to the **Waze Map** tab.
2. Zoom and pan to locate colored lines along a roadway.
3. Click the line to see additional details including:
 - Traffic level (light, moderate, heavy, bumper to bumper)
 - Average speed
 - Driving time



Waze | Live Data view displays Traffic Congestion Information

View Event Information

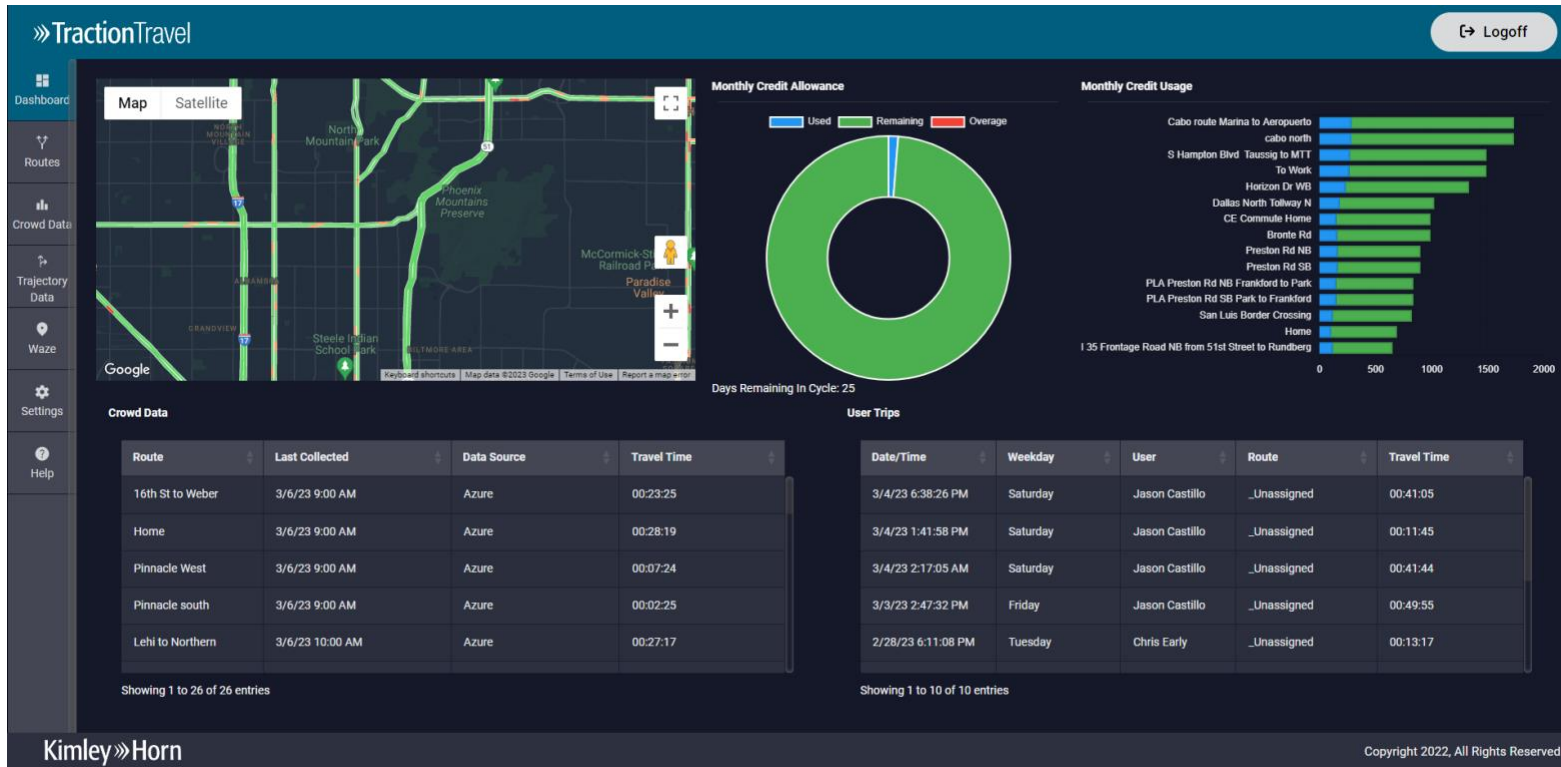
1. Navigate to the **Waze Map** tab.
2. Zoom and pan to locate event icons, such as hazards, accidents, construction, and traffic jams.
3. Click the icon to see additional details.



Waze | Live Data view displays Event Information

Dashboard

Use the Traction website dashboard to view overall traffic conditions, travel times, and credit usage metrics. Data on the dashboard is an aggregate of all users within the agency group.



Dashboard display example

View Traffic Conditions Map

1. On the **Dashboard** tab, view the map at the top left with current traffic conditions. Zoom and pan to locate areas of interest.

View Monthly Credit Allowance

1. On the **Dashboard** tab, locate the Monthly Credit Allowance donut chart.
2. The used and remaining crowd data credits are shown for the current billing cycle.
3. Days remaining in the current cycle is shown at the bottom.

View Monthly Credit Usage

1. On the **Dashboard** tab, locate the Monthly Credit Usage chart.

2. Used and remaining crowd data credits are shown by route for the current billing cycle, for the 15 highest usage routes.

View Crowd Data Information

1. On the **Dashboard** tab, locate the Crowd Data table.
2. View recent Crowd Data collected, including the route name and travel time.

View User Trips Information

1. On the **Dashboard** tab, locate the User Trips table.
2. View recent User Trips collected, including the trip date/time, user, route, and travel time.

Settings

Use the settings tab to input email addresses and a schedule for credit usage reports.

Credit Usage Reports

1. Navigate to the **Settings** tab.
2. Select a frequency of how often the usage reports should be sent.
3. Enter the recurrence pattern for the frequency.
4. Enter email address(es) for where the reports should be sent.

Questions?

If you have any suggestions for additional resources or have questions on the instructions, please contact:
traction@kimley-horn.com.

Traction Travel