



Capabilities Review



Overview

- 1. Web based approach** works with any mobile, any AVL equipment
- 2. Everyone sees the same view (COP)**
- 3. Open Geospatial Consortium (OGC) compliant core build** facilitates flexibility and interoperability

Product Review

- Basic Features (Billboard, Admin, and Help)
- Tracking & History Features
 - Base Maps
 - Layers
 - Real Time Location Data Overview
 - SWIM (System Wide Information Management)
 - Automatic Vehicle Location (AVL)
 - Smartphone Tracking
 - Annunciations and Warnings
 - Some Emphasis Items
 - Demo

Basic Features



MSP International Airport



Billboard View




Tracking and
History



Admin



Help

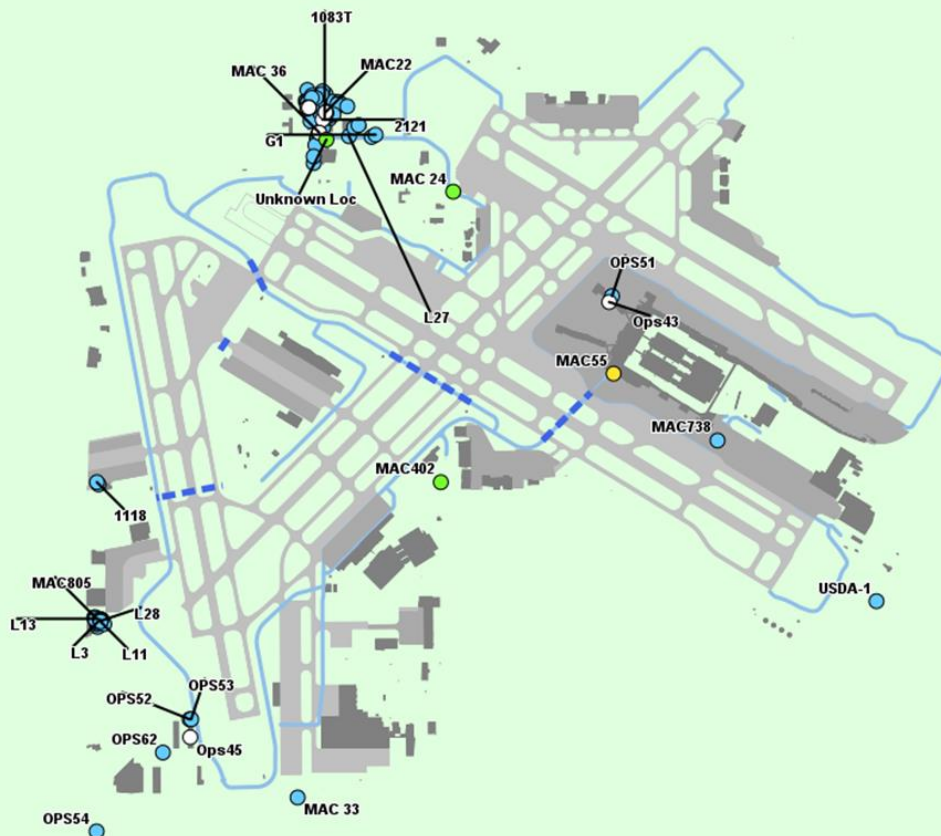
v2.7.4  Feedback

Billboard View

 Billboard

[Home](#)

MAC402	7s
Unknown Loc	13s
MAC 24	1m
MAC55	9m
Ops45	40m
MAC22	56m
MAC 36	1h
2121	2h
MAC397	3h
MAC396	3h
Ops43	4h
Ops44	5h
MAC385	6h
1083T	6h
MAC371	7h
1113	8h
L17	8h
L29	9h
MAC25	9h
MAC381	9h
L14	9h
MAC395	9h
MAC375	9h
MAC398	9h
USDA-1	10h
1080T	12h



Admin Page – Fleets and Vehicles



Admin

Home

Fleets and Vehicles

Overlays

All Vehicles

Fleets

No Fleet Assigned

Test Fleet

A Fleet

Fleet 1

Fleet 2

Phone

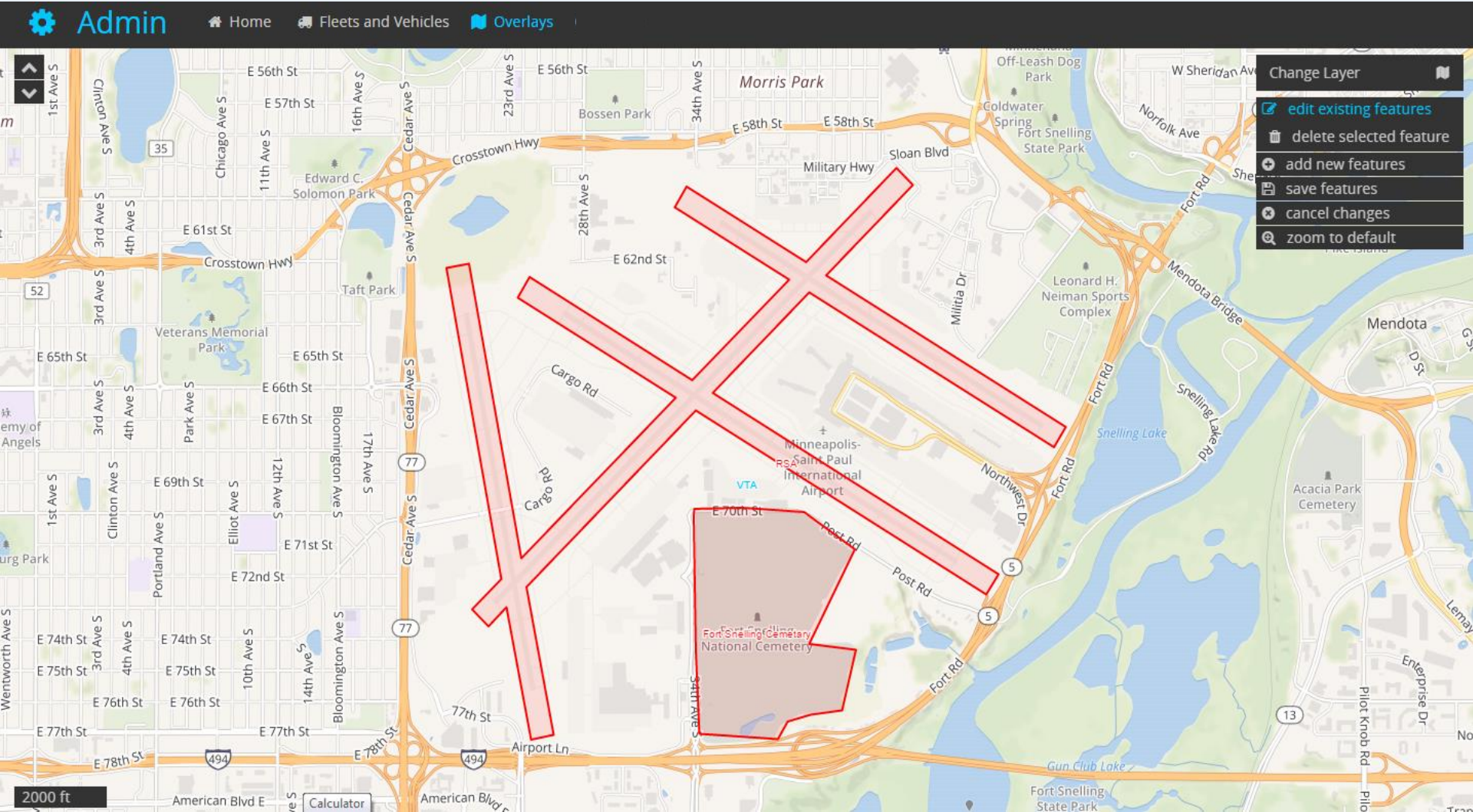
Groupings

testSub

All Vehicles

	ESN	Asset Name	Year	Make	Model	Asset Class	Asset Type	Fleet	Sub Fleet	Sub 1	Sub 2	Sub 3	Notes	Color	Display
	3668606010	Caitlin												77 175 74	Yes
	3486755531	Mobile												152 78 163	Yes
	2851447106	iPhone testing												128 128 128	Yes
	2026313284	Steve's Car												128 128 128	Yes
	3247411949	blammo						Phone						255 127 0	Yes
	2578391233	JimBob												255 127 0	Yes
	3989385752	Cait												128 128 128	Yes
	393480430	anything												128 128 128	Yes
	4275566248	UMGEOCON						Phone						128 128 128	Yes
	2310457663	something												128 128 128	Yes
	2662442116	Matt												128 128 128	Yes
	982656331	phil												128 128 128	Yes
	65920958	xterr a berg												128 128 128	Yes
	1426374694	Blammo												128 128 128	Yes
	2177926815	test												128 128 128	Yes
	1062502788	Skibba1												128 128	Yes

Admin Page – Overlays



Help Pages

AVL Documentation

[Back To Apps](#)

[Introduction](#)

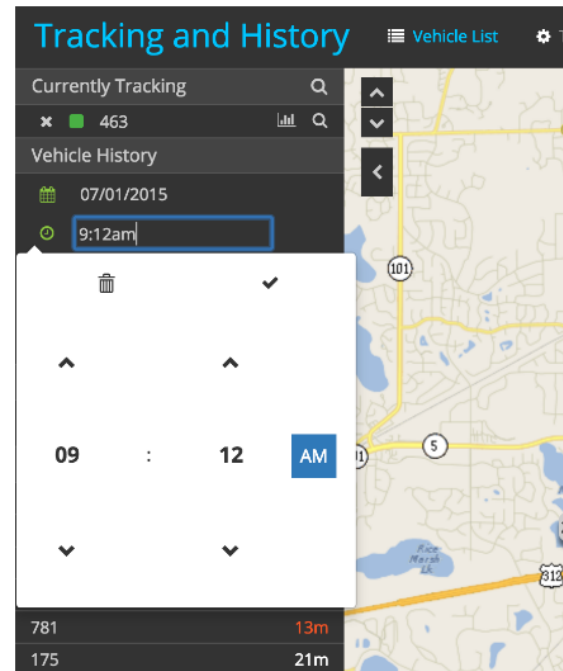
[Main Application](#)

[Administration](#)

[Mobile App](#)

Viewing a Vehicle's History

Last Updated: 2015-12-11

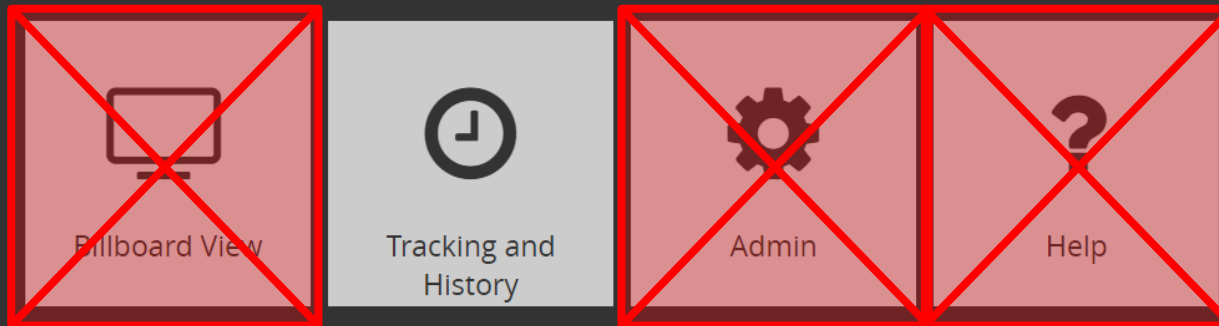


Once you have added a vehicle to your tracking list, you can select a timeframe in which to view where that vehicle has been. In the History section of the sidebar, select your start date and time, and then your end date and time. This is accomplished by clicking on the inputs. A date picker popup will appear to assist you with selecting dates, but you can also type them in manually. When you are happy with your selection, click "submit" and the application will retrieve the data for that vehicle from your selected timeframe.

Tracking and History Features



MSP International Airport

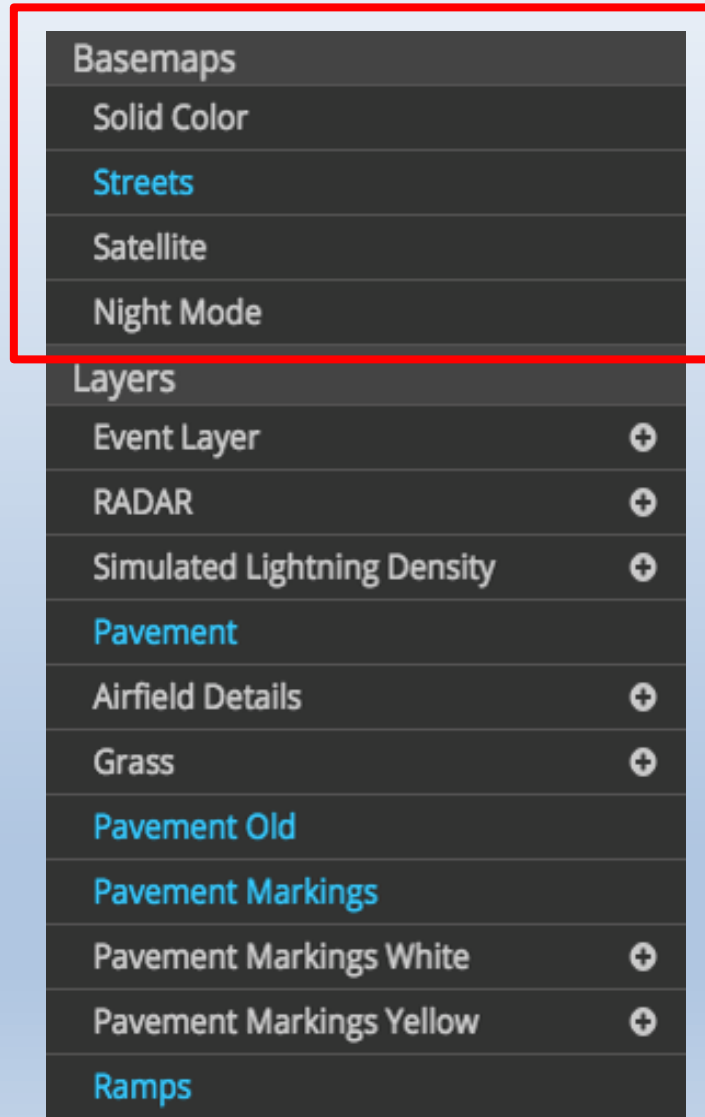


v2.7.4 [Feedback](#)

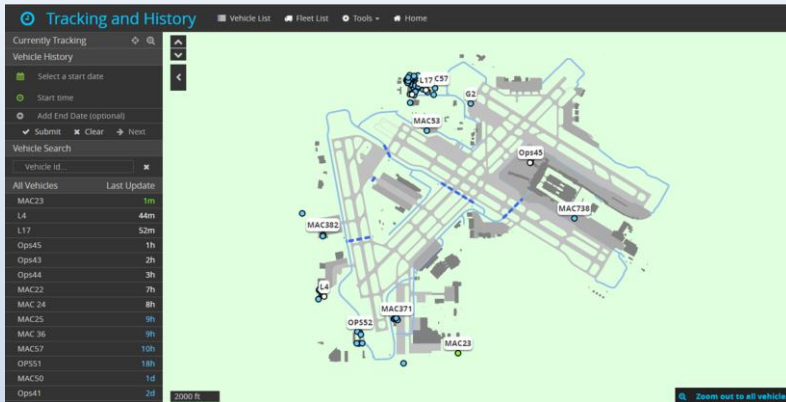
Base Maps

Whatever You Want

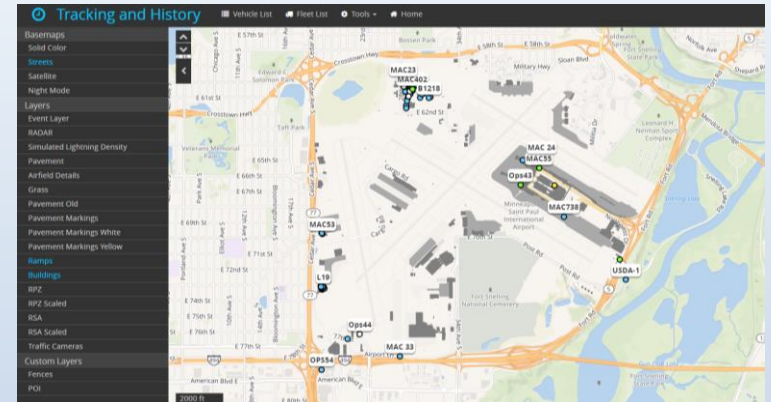
Four Base Maps are Standard



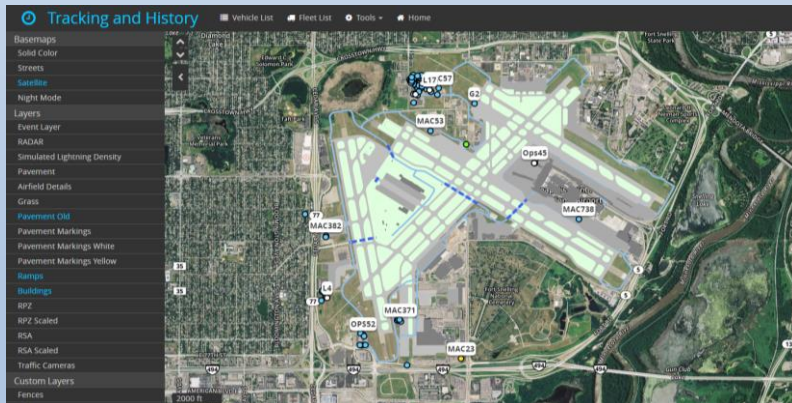
Base Map Examples



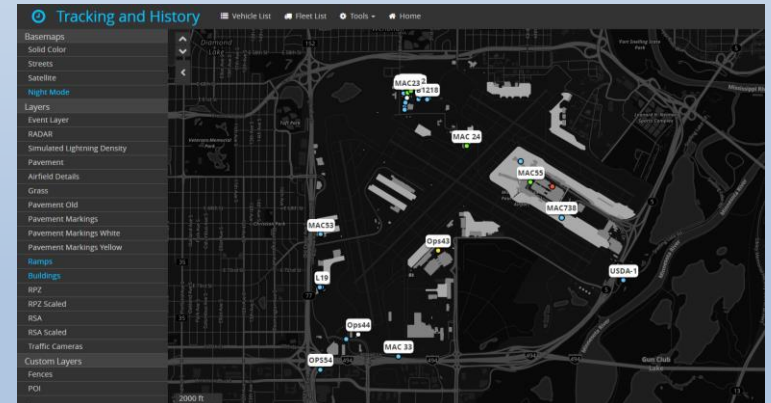
Controller Preferred View – Solid Color
(Airport's Engineer Drawing – Airport only vehicles)



Traditional View - Streets
(General Situational Awareness)



Asset Manager Preferred View - Satellite
(Imagery – See assets outside airport)



Night Mode
(Background intensity fully adjustable)

Layers

Whatever You Want

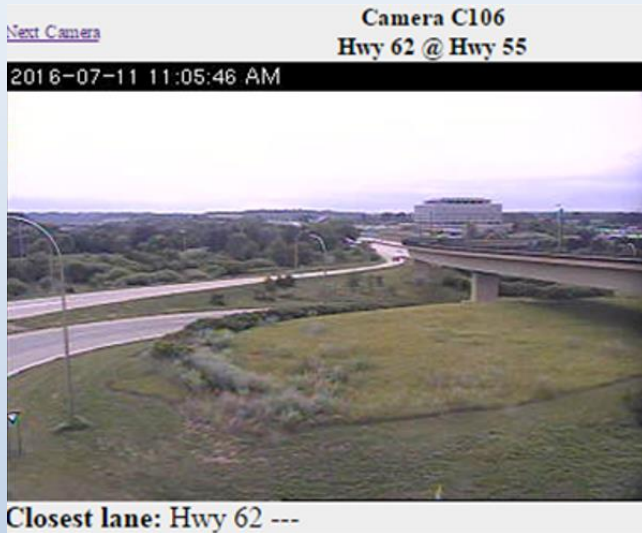
Individual Selects Desired Layers

Basemaps	
Solid Color	
Streets	
Satellite	
Night Mode	
Layers	
Event Layer	+
RADAR	+
Simulated Lightning Density	+
Pavement	
Airfield Details	+
Grass	+
Pavement Old	
Pavement Markings	
Pavement Markings White	+
Pavement Markings Yellow	+
Ramps	

Down to the Lowest Level of Detail



Can Bring In Web Services

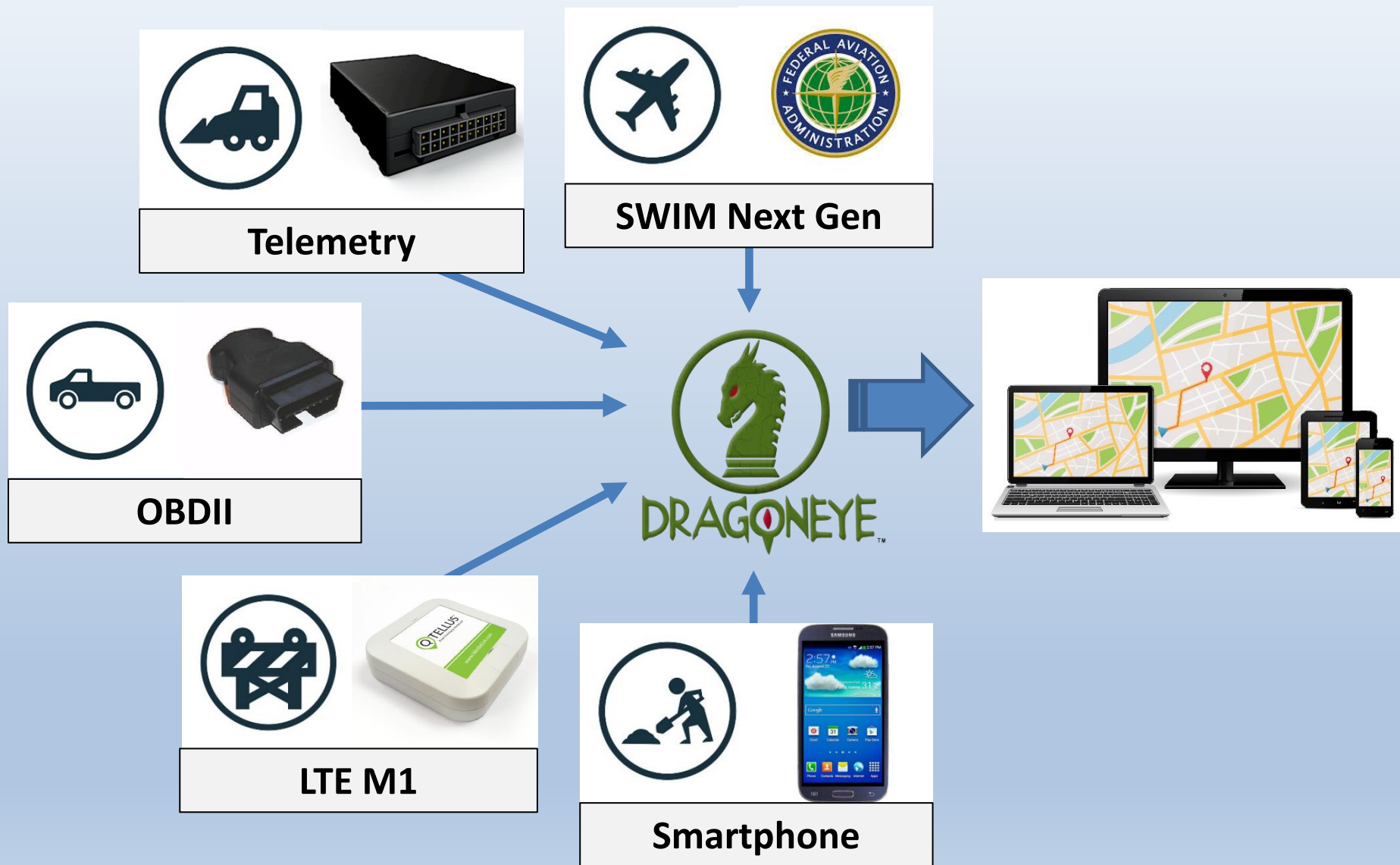


From Live Web Cameras to Real Time Weather

Real-Time Location Data Overview

Whatever You Want

How DragonEye Works



DragonEye Tracking Hardware Resources

- **Support for all network options** to send location signal
 - Cellular,
 - radio, and
 - LoRa options
- Low power **low cost self contained battery options** for tracking baggage carts etc.
- **Annunciation capabilities** to meet any imaginable client needs
- Configurations available for **all international carrier networks**
- Source for cellular plans geared for IoT applications
- FCC Certified
- Built to Industrial temperature tolerance -40 to 85 °C
- Ability to White Label
- **Rapid prototype** to production process for new configurations

SWIM

(System Wide Information Management)

Overlay FAA Systems Data...

What is SWIM?

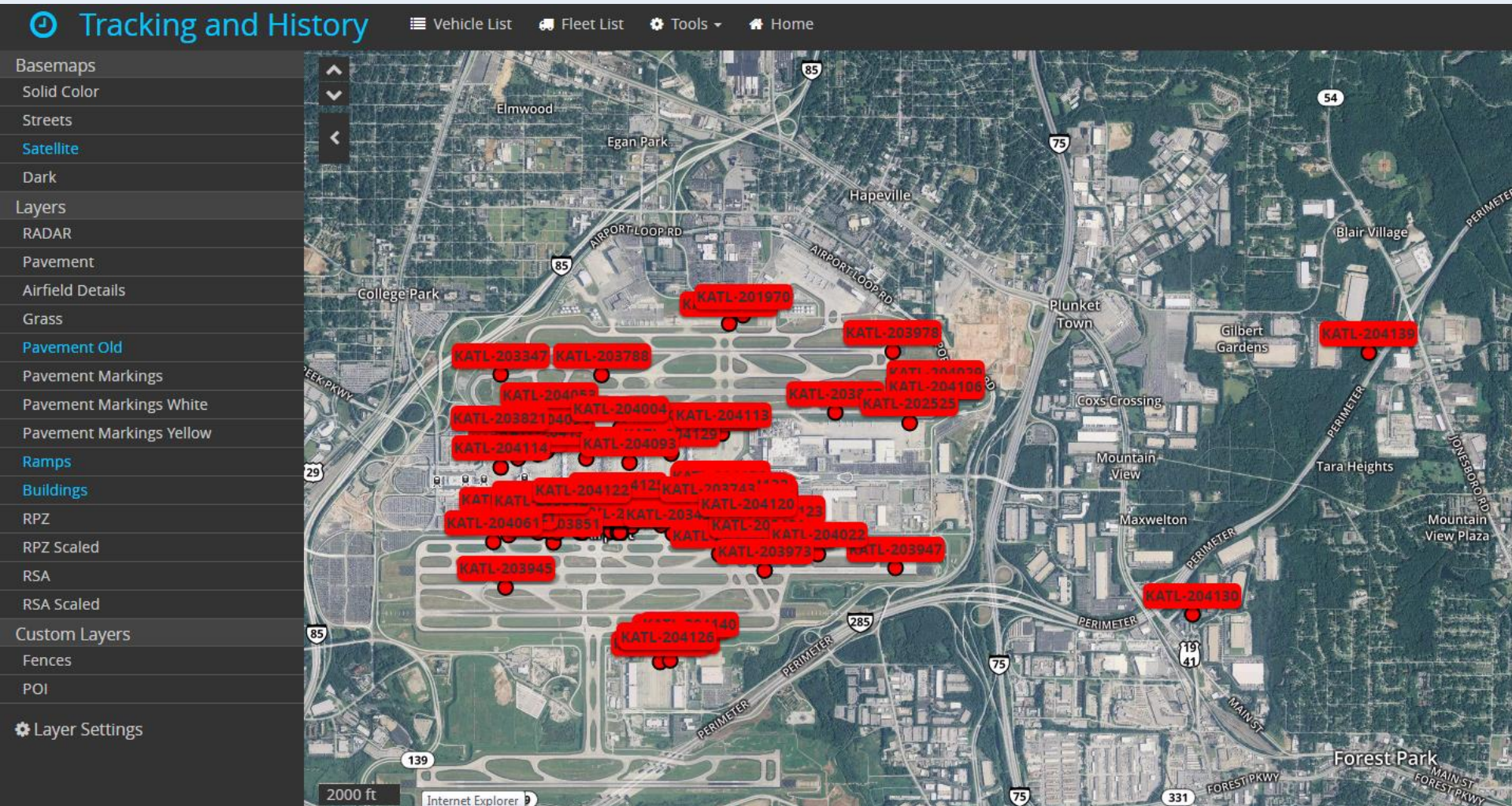


The System Wide Information Management (SWIM) Program is a National Airspace System (NAS)-wide information system that supports Next Generation Air Transportation System (NextGen) goals.

SWIM facilitates the data sharing requirements for NextGen, providing the digital data-sharing backbone of NextGen. SWIM enables increased common situational awareness and improved NAS agility to deliver the right information to the right people at the right time. This information-sharing platform offers a single point of access for aviation data, with producers of data publishing it once and users accessing the information they need through a single connection.

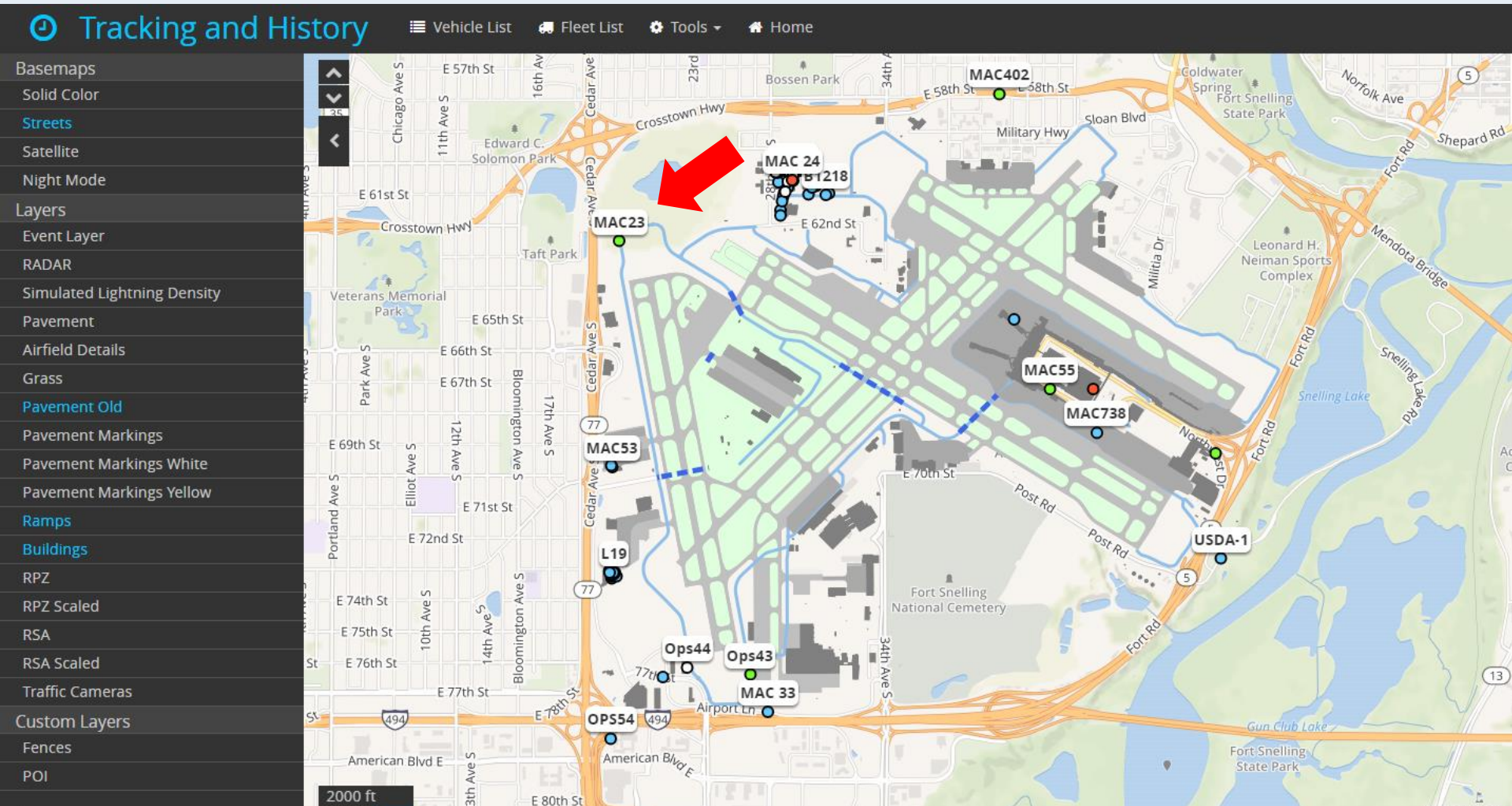
ADS-B, ASDE, ASDE-X, A-SMGS

Passed FAA Integration Test



Automatic Vehicle Location (AVL)

Actively Track Vehicle Real-Time Location



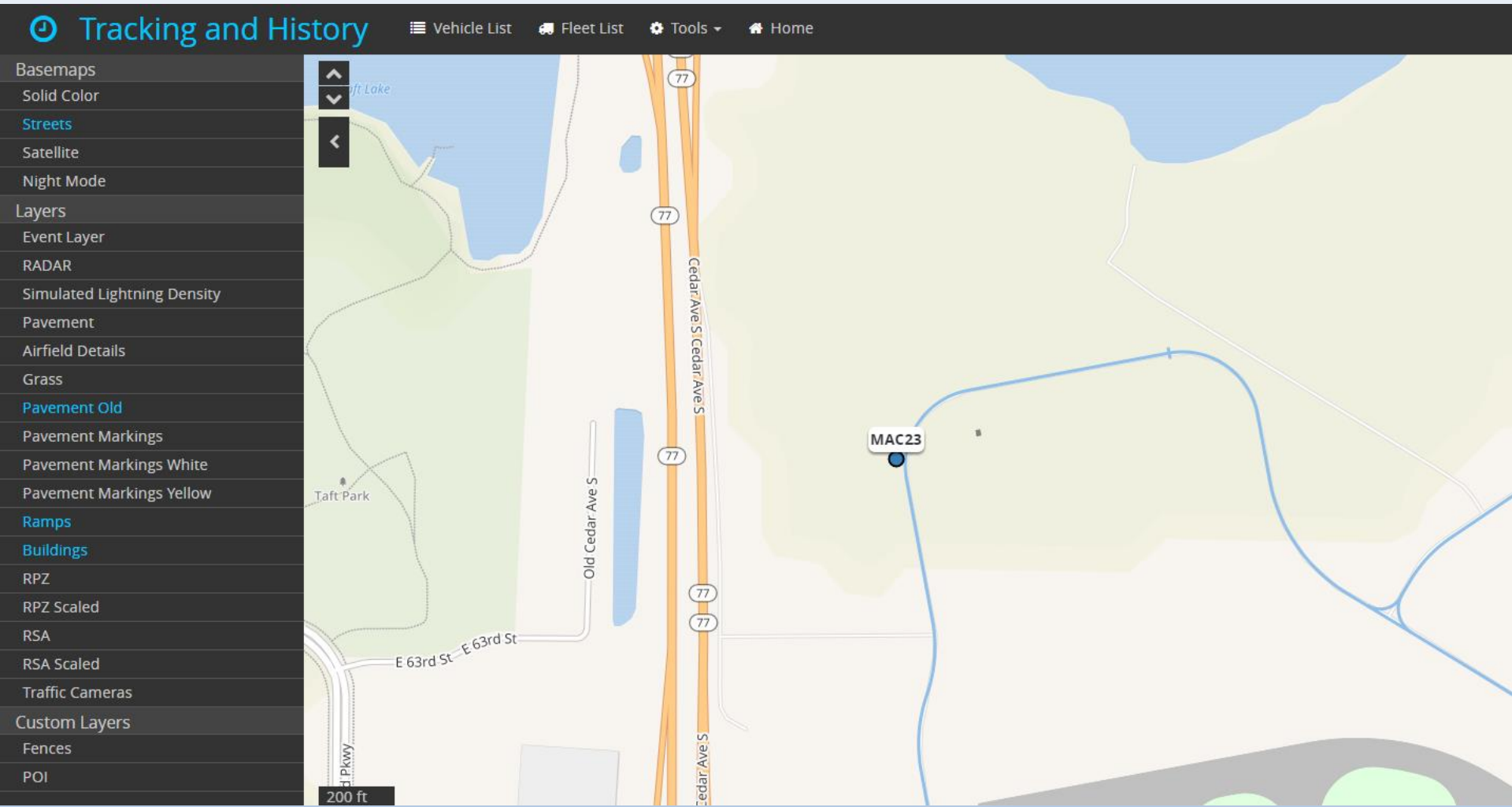
Click, Click, to Track

The screenshot displays the SharedGeo Tracking and History application. On the left is a sidebar with navigation options: Basemaps (Solid Color, Streets, Satellite, Night Mode), Layers (Event Layer, RADAR, Simulated Lightning Density, Pavement, Airfield Details, Grass, Pavement Old, Pavement Markings, Pavement Markings White, Pavement Markings Yellow), Ramps, Buildings, RPZ, RPZ Scaled, RSA, RSA Scaled, Traffic Cameras, Custom Layers, Fences, and POI. The main area shows a map of a region with various streets and landmarks. A popup window titled "Vehicle MAC23" is open, displaying the following details:

- gid: 63
- recid: 10142138
- can: 1470
- esn: 13020118
- vname: MAC23
- acqtime: 2016-11-17 00:59:34 -0600
- latitude: 44°53.401'N
- longitude: 93°14.685'W
- usng: 15TVK80677076
- quality: 1
- class_desc: FOREMAN
- major: Building 8
- color: 128 128 128
- display: true

Below the details is a button labeled "Track This Vehicle" with a location pin icon. A "Close" button is located at the bottom right of the popup. The background map shows several other tracked vehicles labeled with IDs like MAC402, MAC738, Ops43, Ops44, MAC33, OPS54, L19, and USDA-1. The map includes street names like Chicago Ave S, E 61st St, E 69th St, E 74th St, E 75th St, E 76th St, E 77th St, E 78th St, E 80th St, 10th Ave S, 14th Ave S, 34th Ave S, American Blvd E, and Fort Rd. Landmarks such as Veterans Memorial Park, Leonard H. Neiman Sports Complex, Snelling Lake, and Fort Snelling State Park are also visible.

Dedicated Real-Time View Opens



Personalize the Symbols & Tracks

The screenshot displays the 'Tracking and History' web application. The top navigation bar includes a clock icon, the title 'Tracking and History', and links for 'Vehicle List', 'Fleet List', 'Tools', and 'Home'. The left sidebar, highlighted with a red border, contains the following settings:

- Default Mode**
 - ☒ Show Vehicle Labels
- Vehicle Point Colors**
 - Color by time (selected)
 - Color by time
 - Color by fleet
 - Color by vehicle specification
- Vehicle Info Type**
 - Show last location
- History**
 - ☒ Show history labels
 - ☐ Position labels away from trail
 - ☒ Show vehicle pause labels
 - ☐ Show direction arrows
- History Trail Style**
 - Line
- History Label Content**
 - Sequence ID
- History Label Quantity**
 - Add with zoom (faster)

The main map area shows an aerial view of the Gerald R. Ford International Airport. Labels on the map include '40TH ST SE', 'PATTERSON AVE SE', 'DANVERS DR SE', 'TH ST SE', '44TH ST SE', 'JOHN J OOSTEMA BLVD SE', 'ROSS DR SE', and 'Gerald R. Ford International Airport'. A scale bar at the bottom left indicates '1000 ft'.

Time, Fleet, Type, Color or Shape

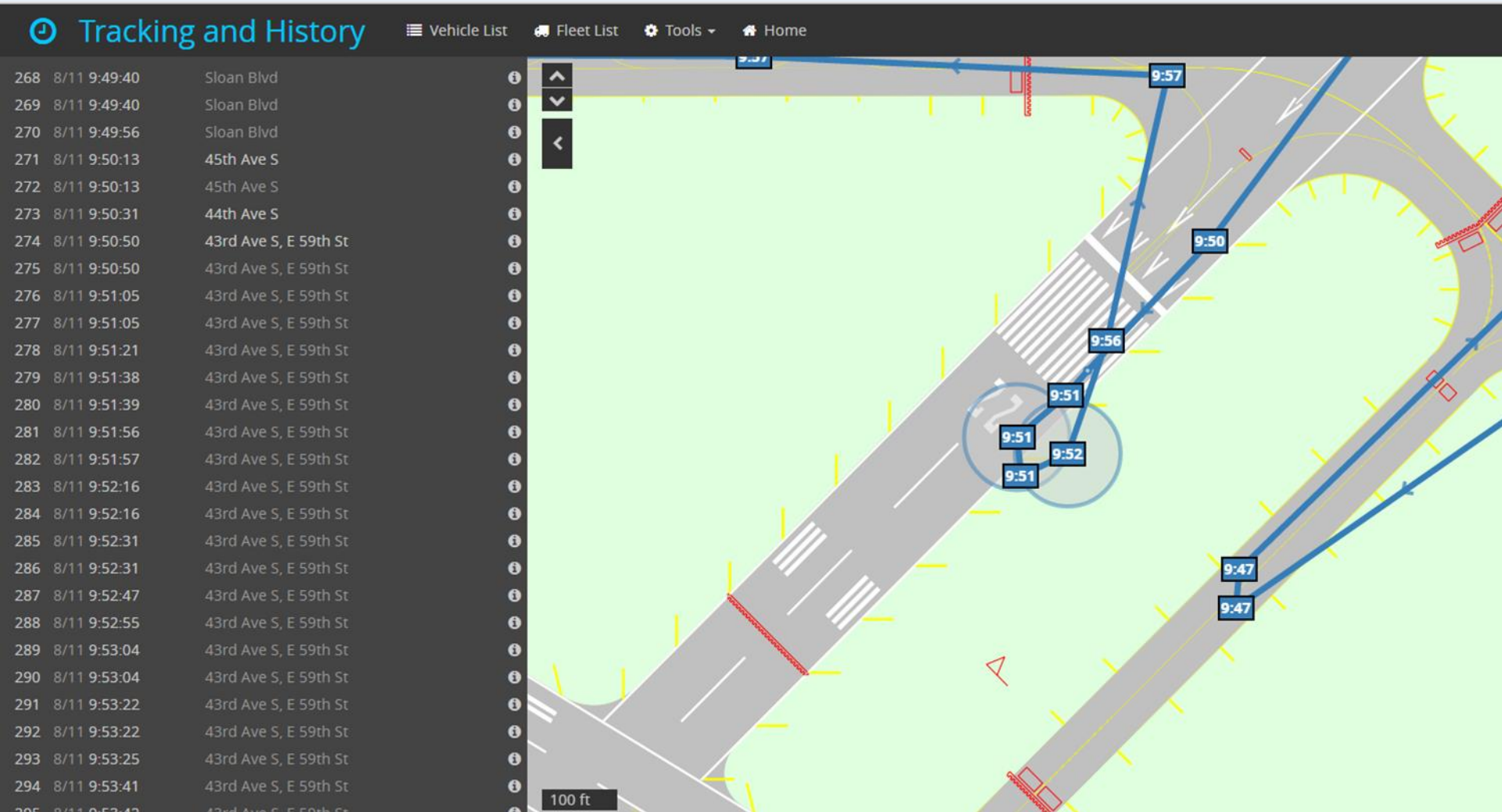
Select History Replay

The screenshot displays the 'Tracking and History' web application. The left sidebar, highlighted with a red box, contains the following sections:

- Currently Tracking**: Includes a toggle for 'MAC23' with a status icon and a refresh button.
- Vehicle History**: Contains a date picker for 'Select a start date', a clock icon for 'Start time', and a plus icon for 'Add End Date (optional)'. Below these are 'Submit', 'Clear', and 'Next' buttons.
- Vehicle Search**: Includes a text input field labeled 'Vehicle Id...' and a search icon.
- Vehicle List**: A table with columns 'All Vehicles' and 'Last Update'. It lists four vehicles: MAC 24, MAC25, Unknown Loc, and MAC55, each with a green '0s' status indicator.

The main map area shows a location near 'Taft Park' and 'Cedar Ave S'. A blue dot labeled 'MAC23' is positioned on the map. A right-hand menu is open, showing options: 'Zoom to Default', 'Options', 'Address Search', 'Layers', 'Legend', and 'Weather'.

Playback Vehicle Location as Time



Playback Vehicle Location as Sequence

Tracking and History | Vehicle List | Fleet List | Tools | Home

Default Mode

- ☒ Show Vehicle Labels

History

- ☒ Show History Labels
- ☐ Position labels away from trail
- ☒ Show Vehicle Pause Labels
- ☒ Show Direction Arrows

History Trail Style

Points

History Label Content

Sequence ID

History Label Quantity

Add with zoom (faster)

Tooltips

- ☒ Show Tooltips

100 ft

Thursday, August 11, 2016

Smartphone Tracking

Mobile Can Join System

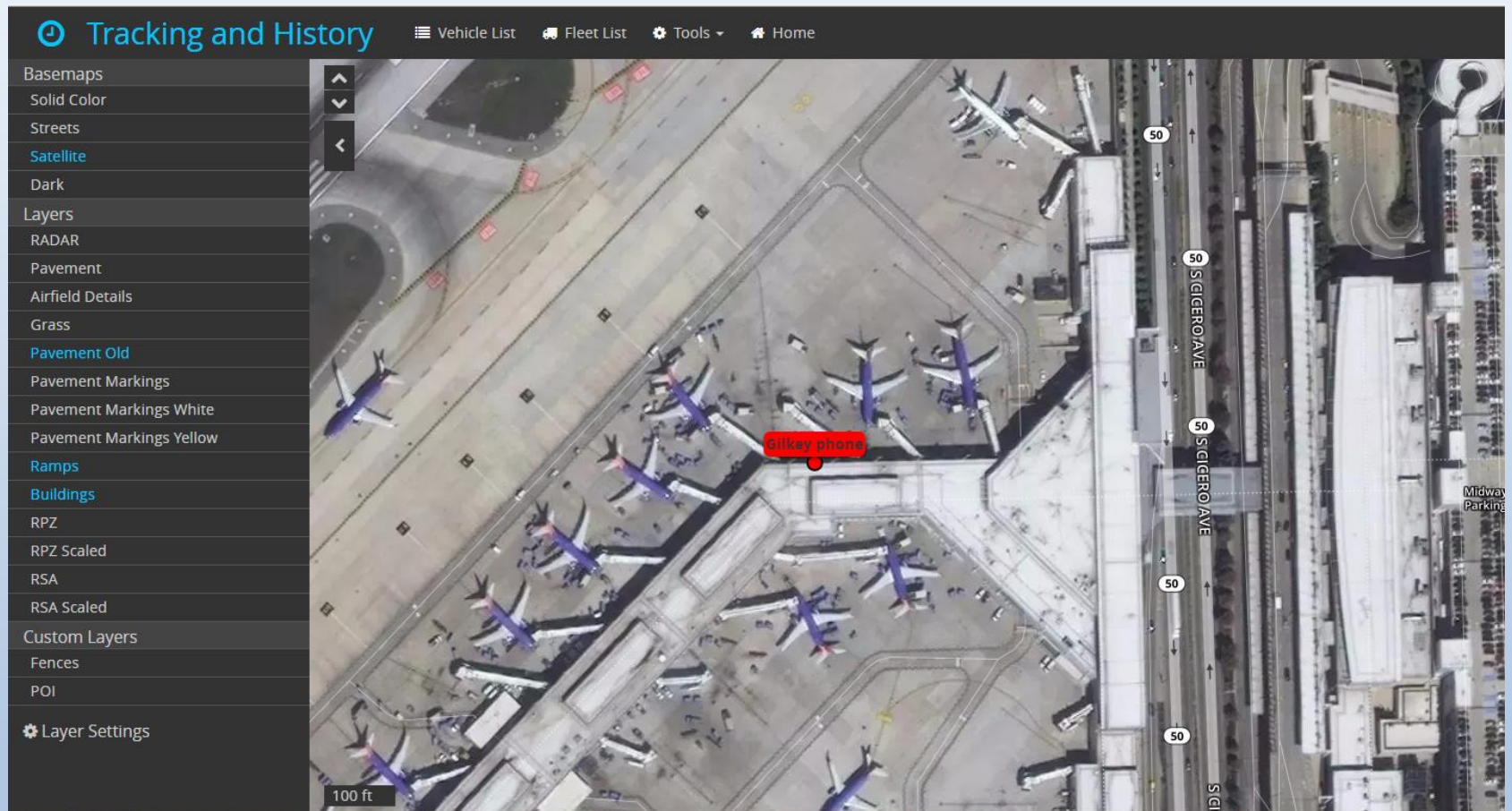
AVL Mobile

vehicle name

Track Me

In an Emergency – Asset Awareness Added to View

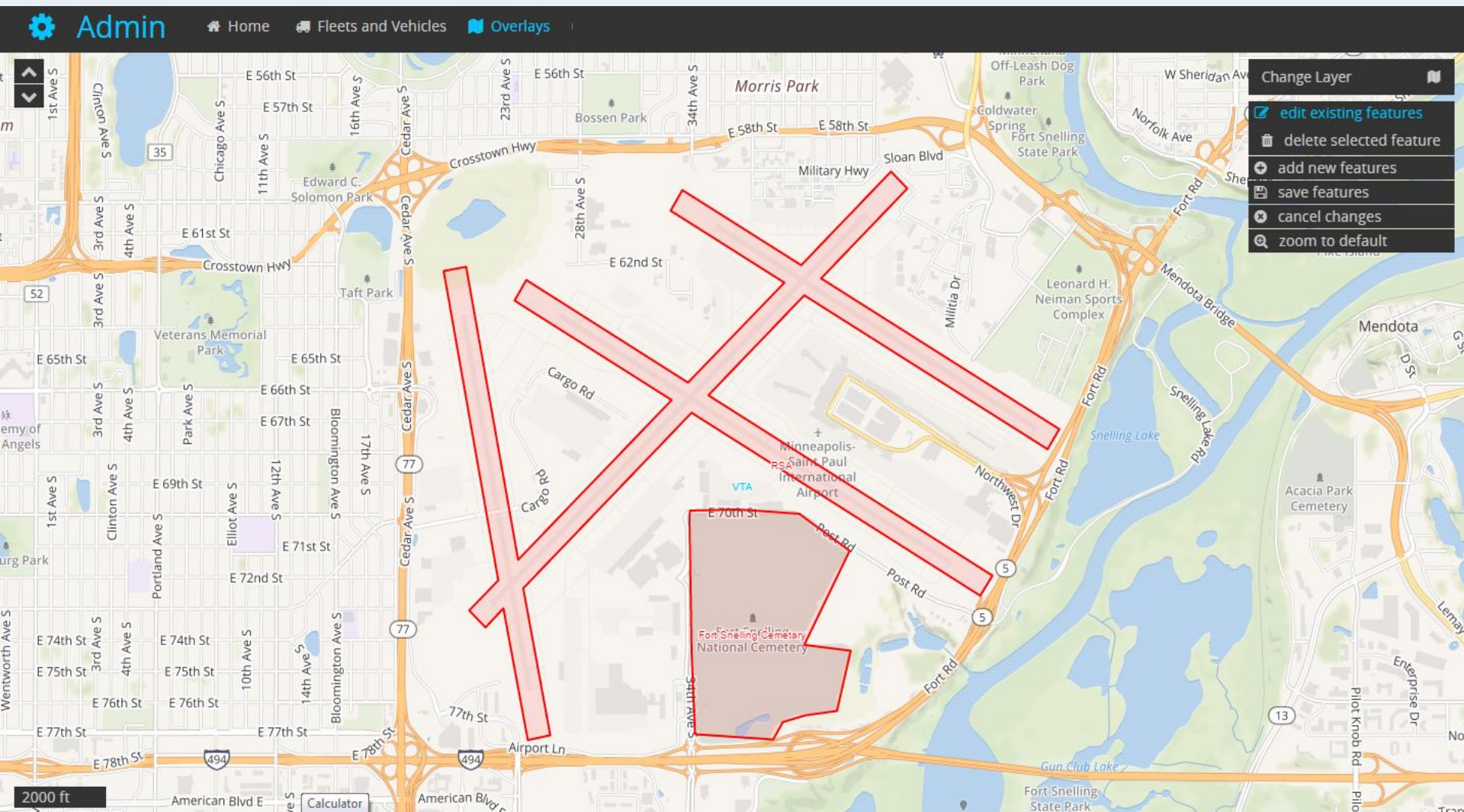
Tracked Anywhere



Even enroute at an Airport

Annunciations and Warnings

Inclusive/Exclusive Geofences



Create Unlimited Geo-fencing

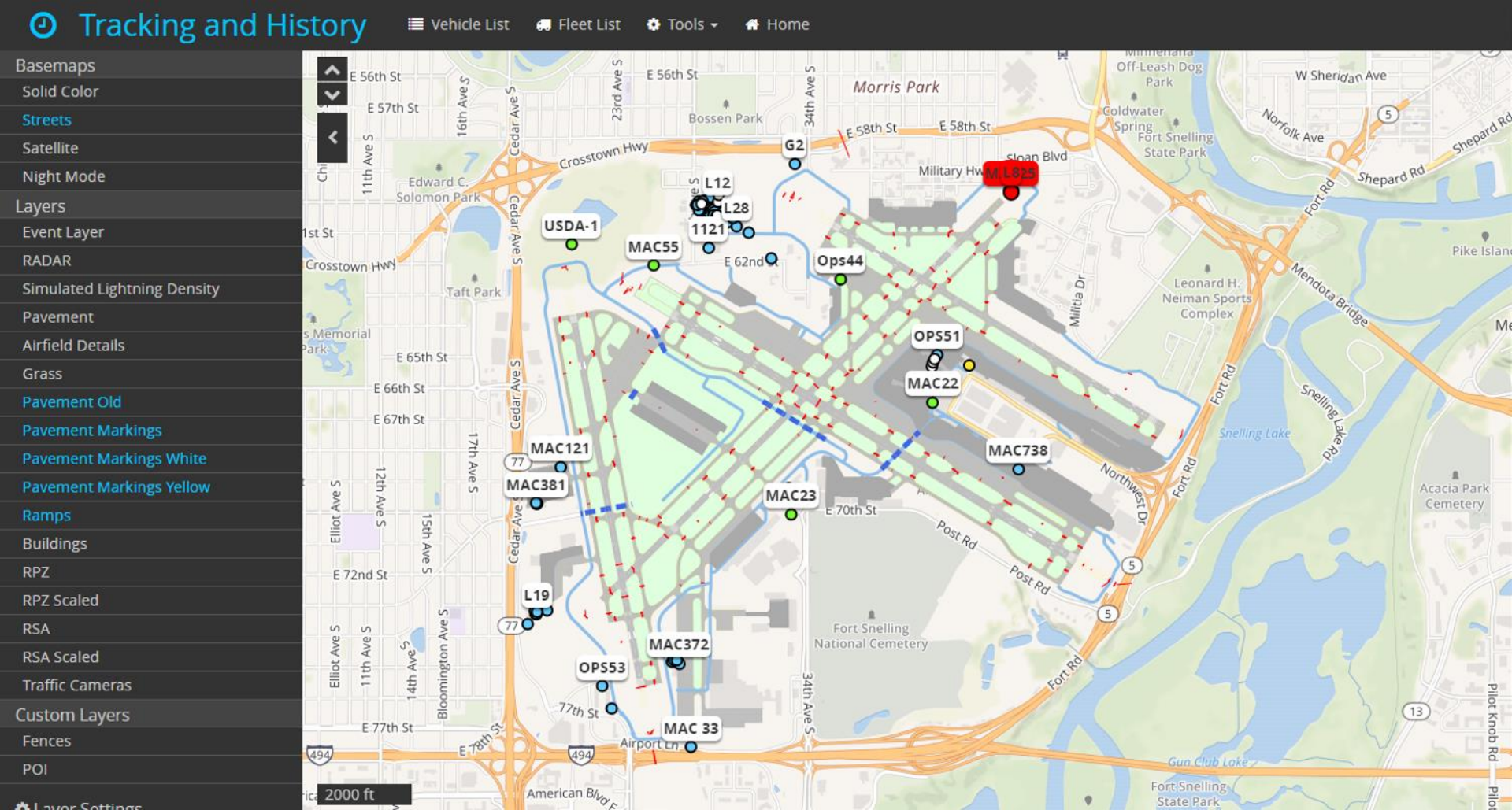


Basic RIWS Visual Warning – **Danger!**



Vehicle location dot and side bar tracking number turn red and vehicle number flashes

No Matter Which View Selected



The image is a screenshot of a web-based application titled "Tracking and History". The interface is divided into a sidebar on the left and a main map area on the right. The sidebar contains a list of navigation and layer options: "Basemaps", "Solid Color", "Streets", "Satellite" (highlighted in blue), "Night Mode", "Layers", "Event Layer", "RADAR", "Simulated Lighting Density", "Pavement", "Airfield Details", "Grass", "Pavement Old", "Pavement Markings", "Pavement Markings White", "Pavement Markings Yellow", "Ramps", "Buildings", "RPZ", "RPZ Scaled", "RSA", "RSA Scaled", "Traffic Cameras", "Custom Layers", "Fences", "POI", and "Layer Settings". The main map area displays a satellite view of an airfield. A red location pin labeled "L8 Mustangs" is placed on a grassy field. Overlaid on the map are various colored lines and shapes: a blue line representing a runway or taxiway, yellow dashed lines for boundaries, and red dashed lines for other boundaries. A scale bar in the bottom left corner indicates "200 ft". The map includes labels for various streets and landmarks, such as "SLOAN BLVD", "MILITARY HWY", "CONSTITUTION AVE", "MUSTANG DR", "MINUTEMAN DR", "133rd Airlift Wing", "Starbase", "APOLLO AVE", "5TH ST", "E 59TH ST", "43RD AVE", "45TH AVE", "46TH AVE", "WEIGEL BLVD", and "MUSTA". The application has a dark grey header with navigation icons for "Vehicle List", "Fleet List", "Tools", and "Home".

Back to Normal



Next Generation RIWS In Development



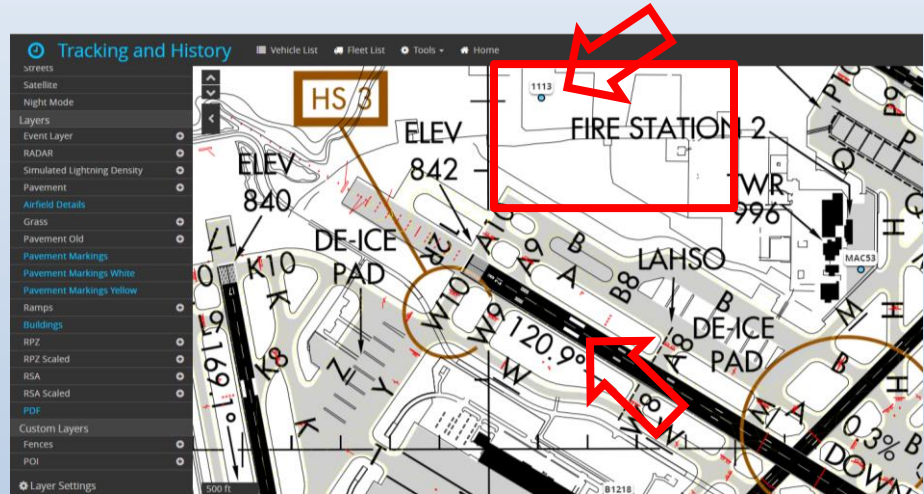
In Cab Audio and Visual Warning
FAA AC 150/5210-25 compliant

Some Emphasis Items

Turn Layers On/Off or Track on Any Base Map



Simplest Pilot View
(FAA Airport Diagram – No layers added)



Pilot Precision View
(FAA Airport Diagram – Multiple layers added)

Incredible Flexibility For Vehicle Info Selections

Point colors:

- Color by time
- Color by vehicle type

Vehicle Info Type (sidebar display)

- Show last location (named polygon)
- Show last time (signal report)

History Trail Style

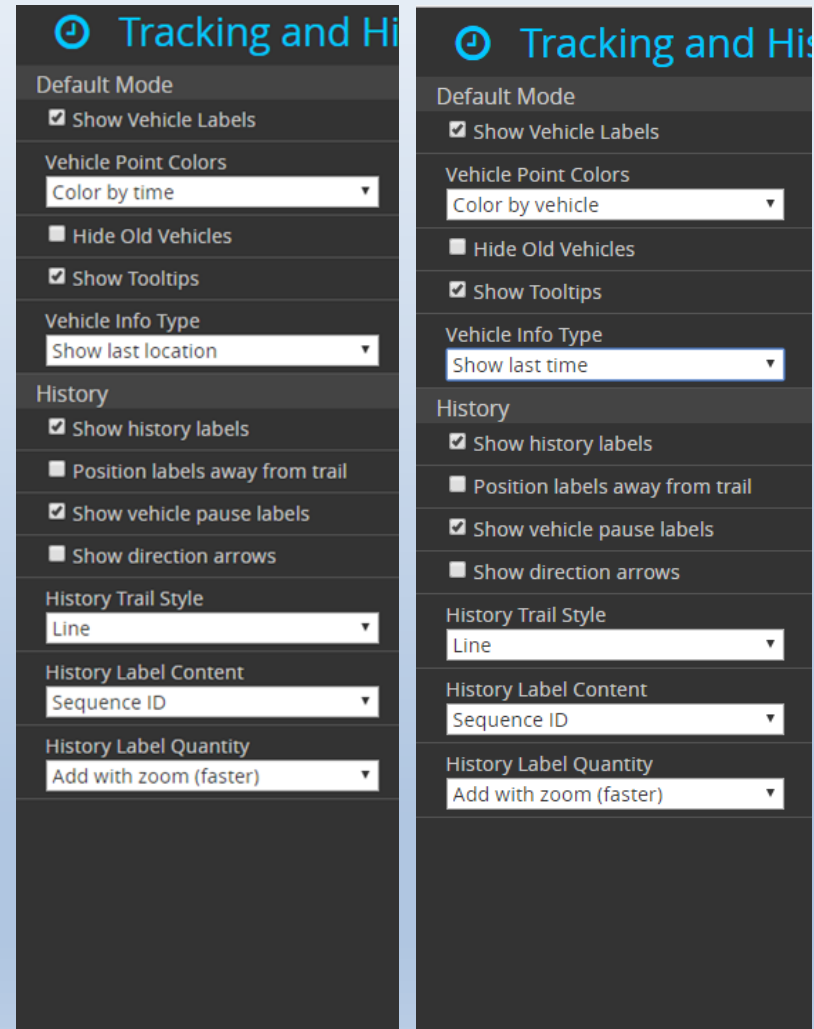
- Line
- Dots
- None

History Label Content

- Time
- Sequence ID

History Label Quality

- Add with zoom
- Show all



Easy Track Delete

Tracking and History | Vehicle List | Fleet List | Tools | Home

Currently Tracking | Vehicle History

Select a start date | Start time | Add End Date (optional) | Submit | Clear | Next

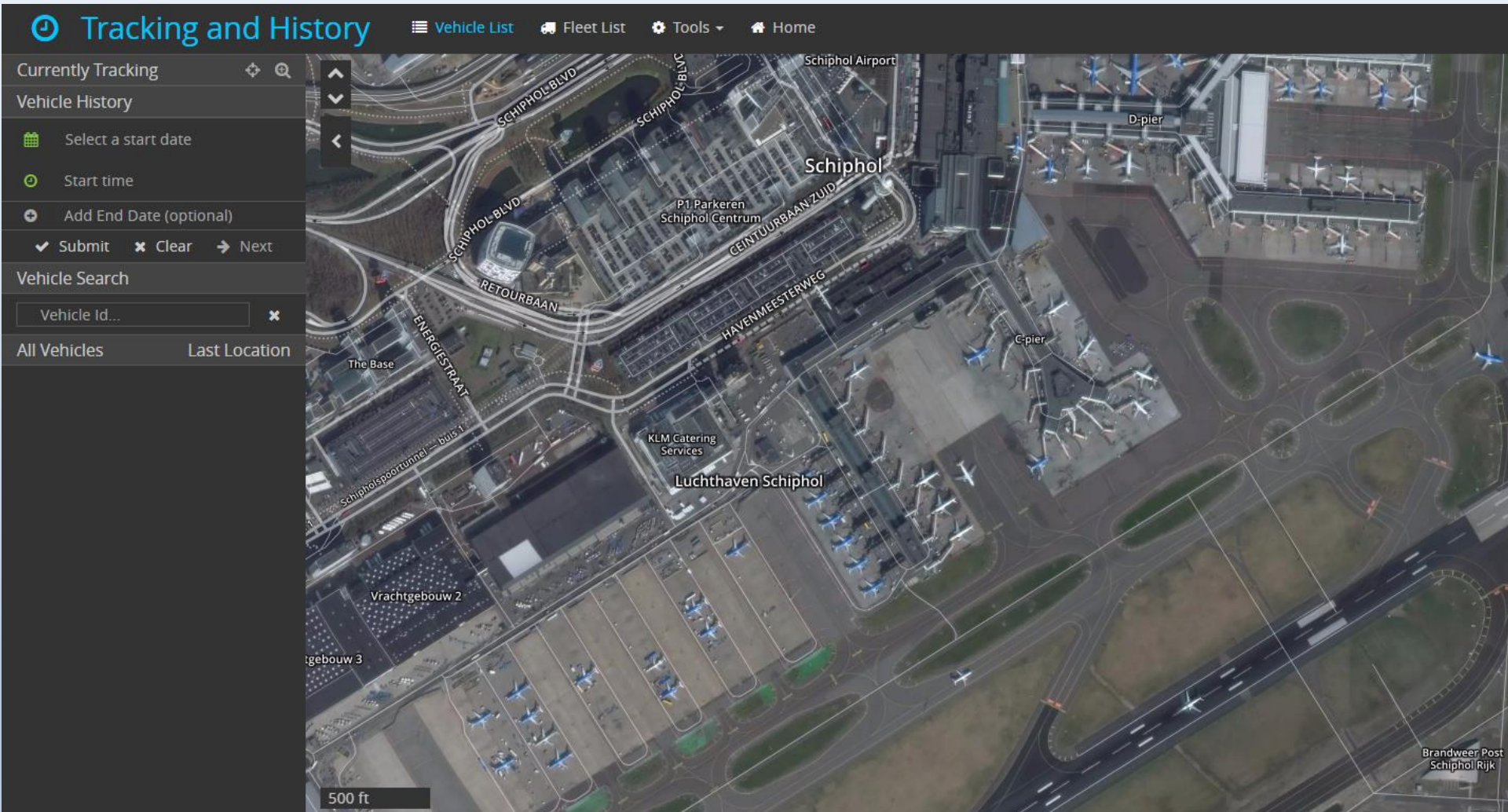
Vehicle Search

Vehicle Id... | All Vehicles | Last Location

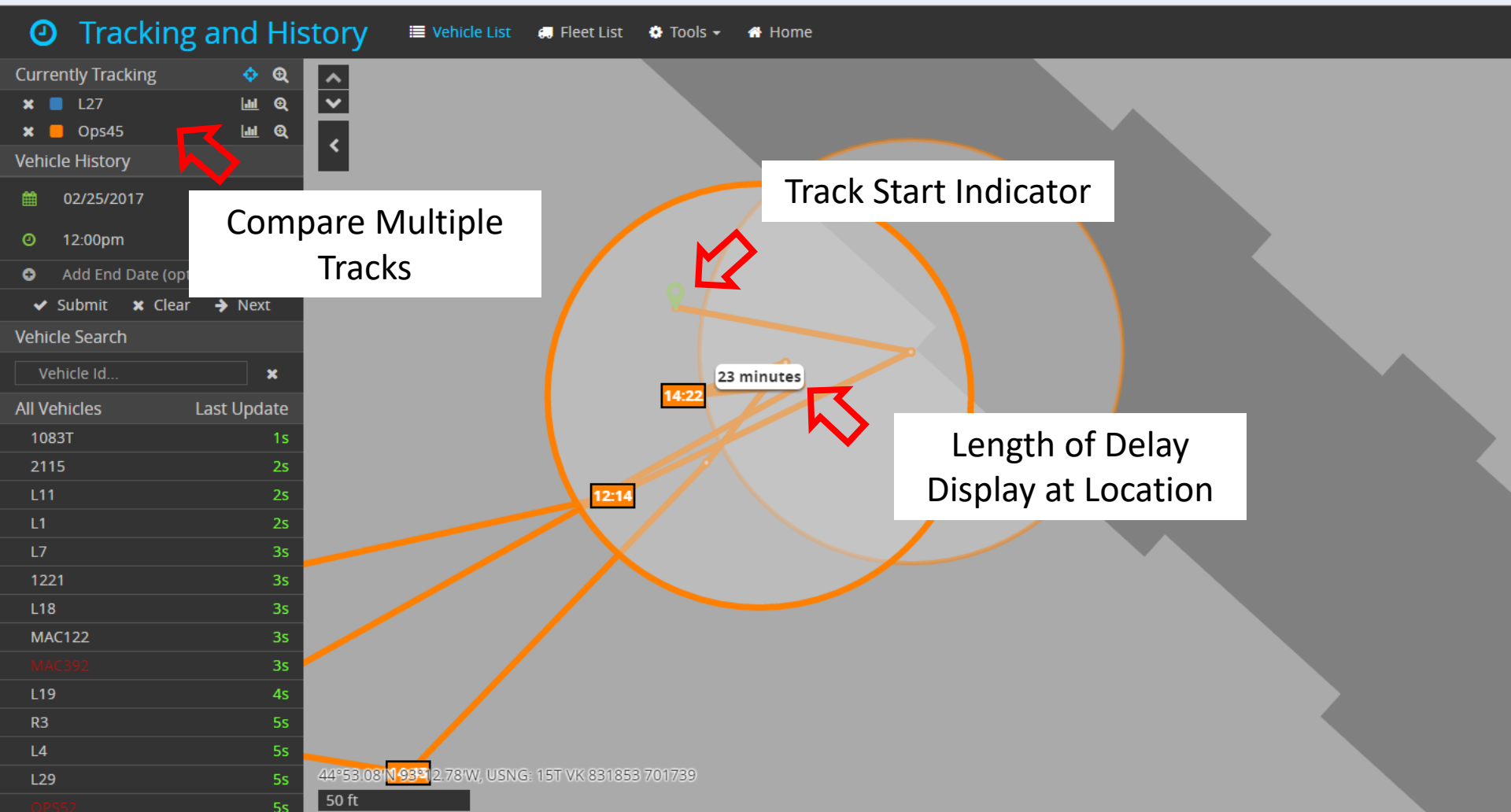
Steve's iPhone

The image shows a screenshot of a web-based tracking application. The interface includes a top navigation bar with 'Tracking and History' as the active section, alongside links for 'Vehicle List', 'Fleet List', 'Tools', and 'Home'. Below this, there are two main panels on the left: 'Currently Tracking' and 'Vehicle History'. The 'Currently Tracking' panel contains filters for 'Select a start date', 'Start time', and 'Add End Date (optional)', along with 'Submit', 'Clear', and 'Next' buttons. The 'Vehicle History' panel has a 'Vehicle Search' section with a text input field and a search icon, and a table with columns 'All Vehicles' and 'Last Location'. The table lists 'Steve's iPhone'. The main area of the application is an aerial satellite map of Schiphol Airport. A red pin is placed on the map, labeled 'Steve's iPhone' in a red box. The map shows various airport features, including runways, taxiways, parking lots, and terminal buildings. Labels on the map include 'Schiphol Airport', 'D-pier', 'C-pier', 'Schiphol Centrum', 'P1 Parkeren', 'Havenmeesterweg', 'Centuurbaan Zuid', 'Schiphol Blvd', 'Retourbaan', 'Energiestraat', 'The Base', 'Schipholspoortunnel - bus 1', 'Vrachtgebouw 2', 'Vrachtgebouw 3', 'KLM Catering Services', 'Luchthaven Schiphol', and 'Brandweer Post Schiphol Rijk'. A scale bar at the bottom left indicates '500 ft'.

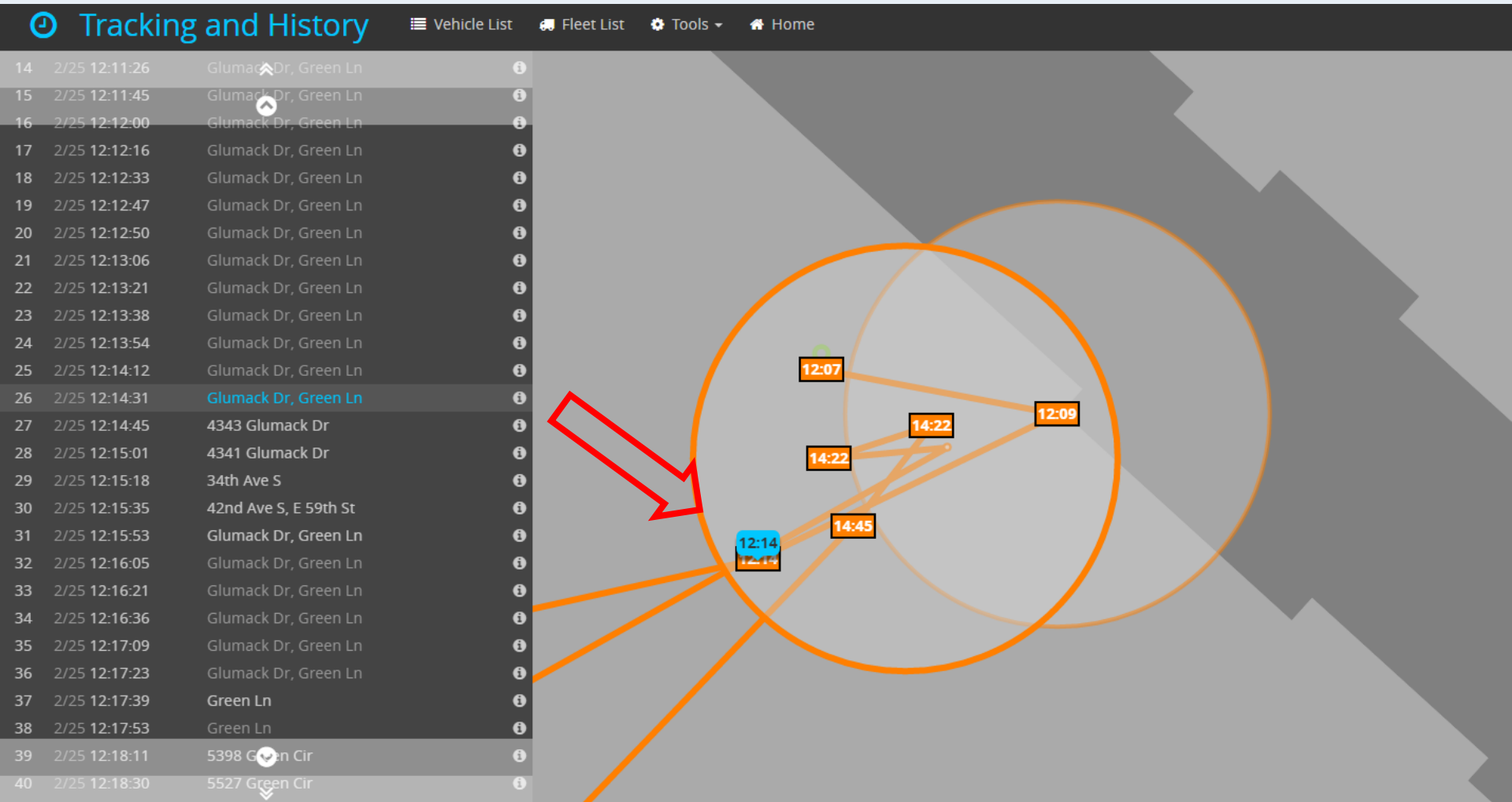
Easy Track Delete



Extended Pause Feature



Replay Onscreen Track Following



Search Using the Built in Geocoder

Address Search

5500 44th St SE

Grand Rapids

Michigan

Submit

USNG

16t fn 20077 48998

Submit

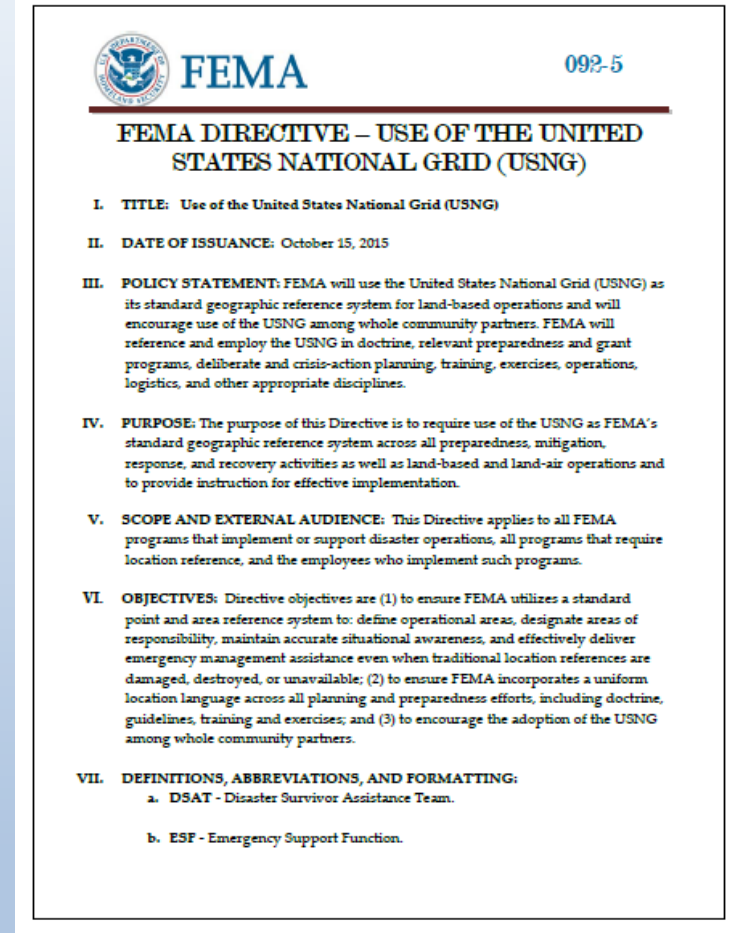
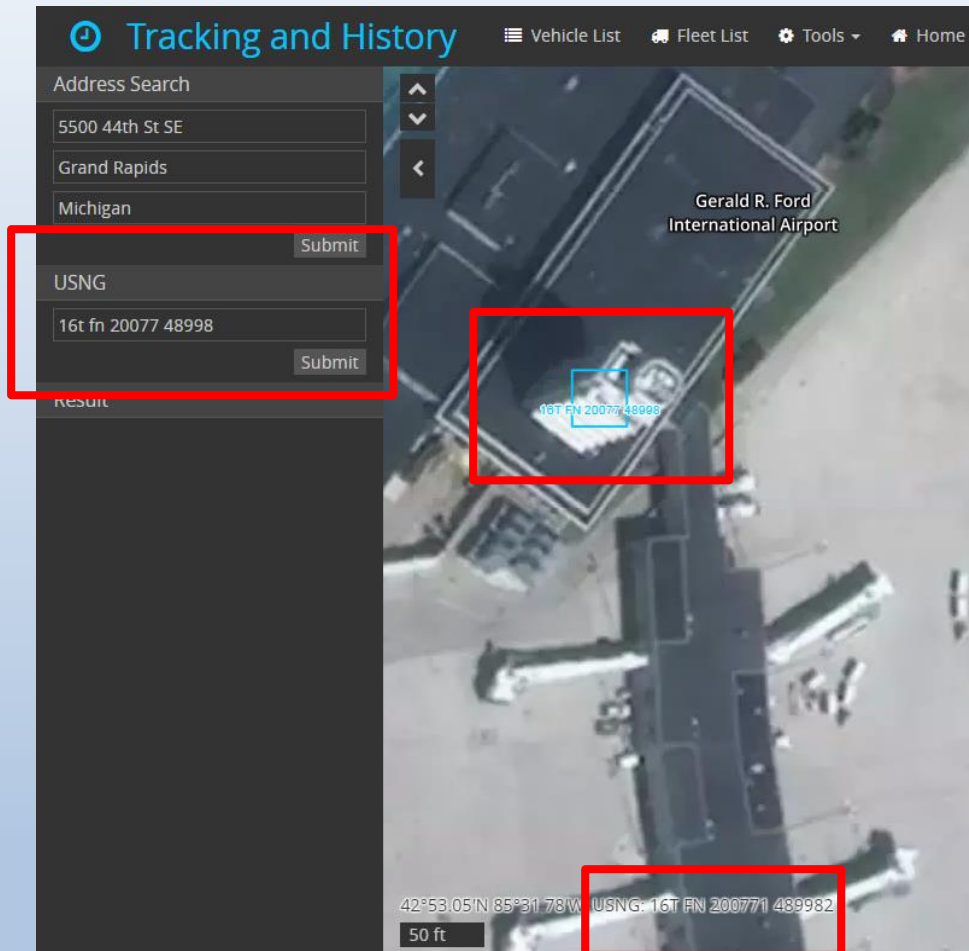
Result

**Military Grid
Reference
System (MGRS)
search outside
the U.S**

Accuracy



Granularity

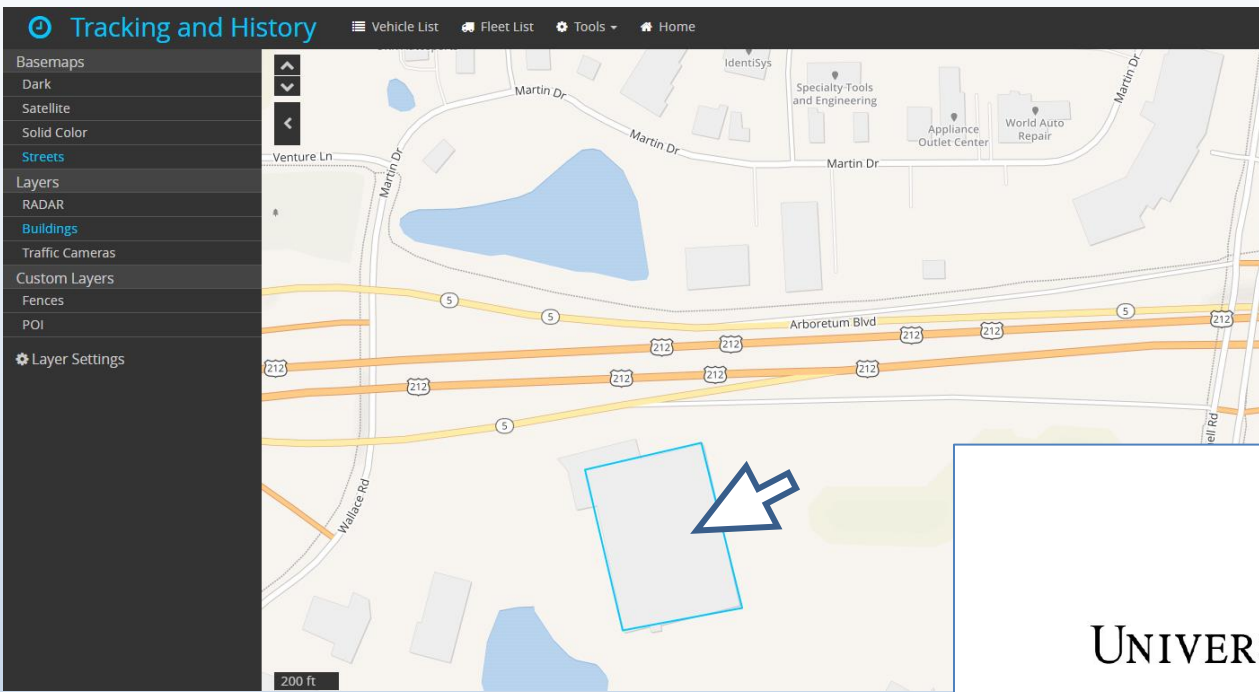


New U.S. National Emergency Response Geo-location Standard

SharedGeo & USNG



- SharedGeo runs the Nation's USNG Information Center
- SharedGeo has developed the majority of the related USNG coding and tools



Point,
Click,
View



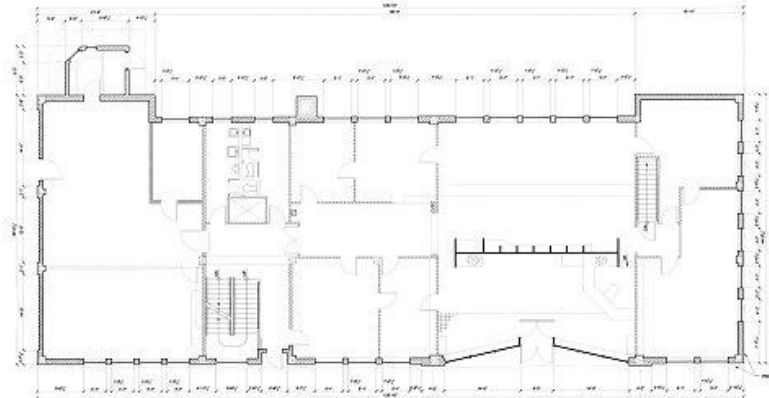
UNIVERSITY OF MINNESOTA

Gilkey Bioscience Building Emergency Plan



Building 225-S
1654 West Essex,
St. Paul, MN

Information Desk Phone: 651-664-8750
Information Desk Email: info@umn.gilkey.edu



FIRST FLOOR PLAN

MATERIALS

- EXPOSED CONCRETE FLOORING IN WEST WORK AREA
- F&B SQUARE TILE AT ENTRY
- CERAMIC TILE FLOORING & WALLS IN THE RESTROOMS
- VINYL TILE IN THE MAIN STAIRWAY
- WALL-TO-WALL CARPETING ELSEWHERE
- 12"X12" ACOUSTIC TILE CEILING IN PUBLIC AREAS
- STONE VENEER ON EAST, SOUTH & WEST FACADES
- BRICK VENEER ON NORTH FACADE

Demo