Risk Mitigation with ForeFlight

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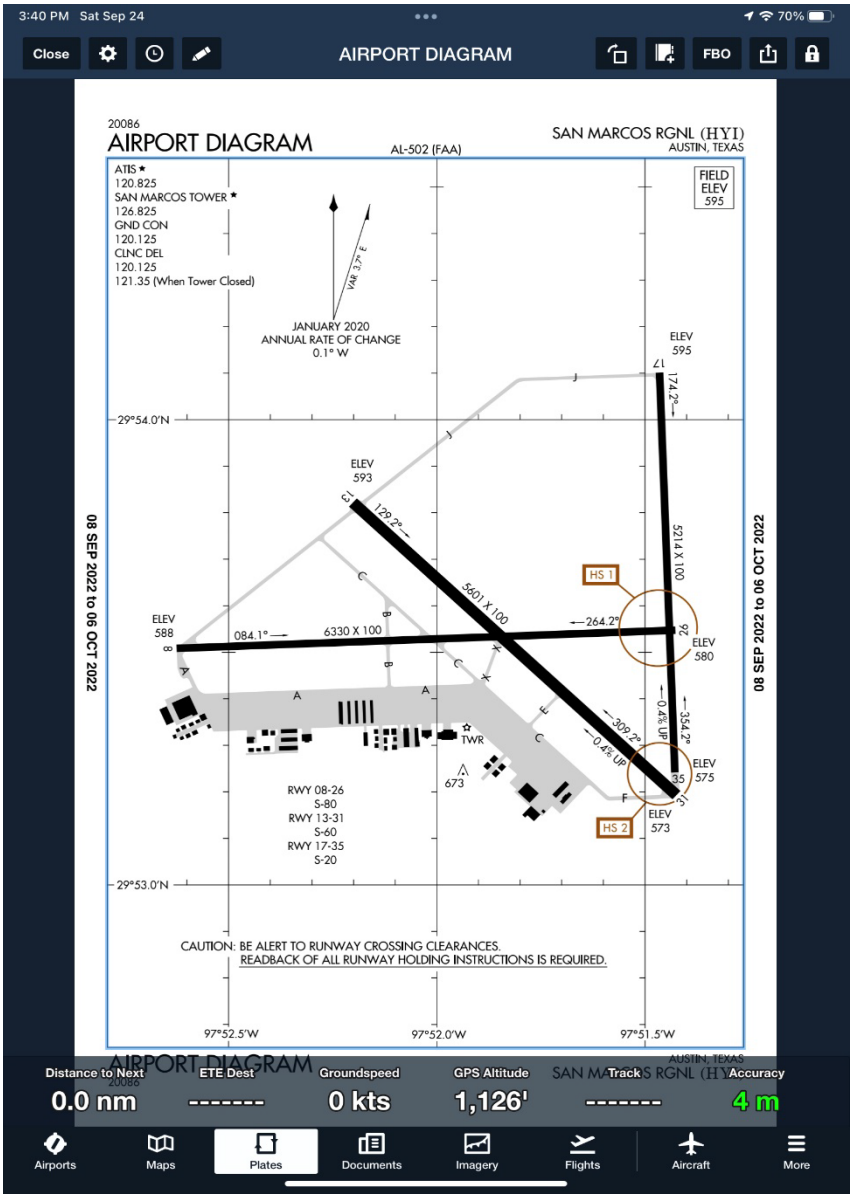
In every flight we should identify the risks and then try to mitigate where feasible. How can ForeFlight help with risk mitigation? Here are three common risks and the ForeFlight features that can help us mitigate them.

Risk #1 – Runway incursions



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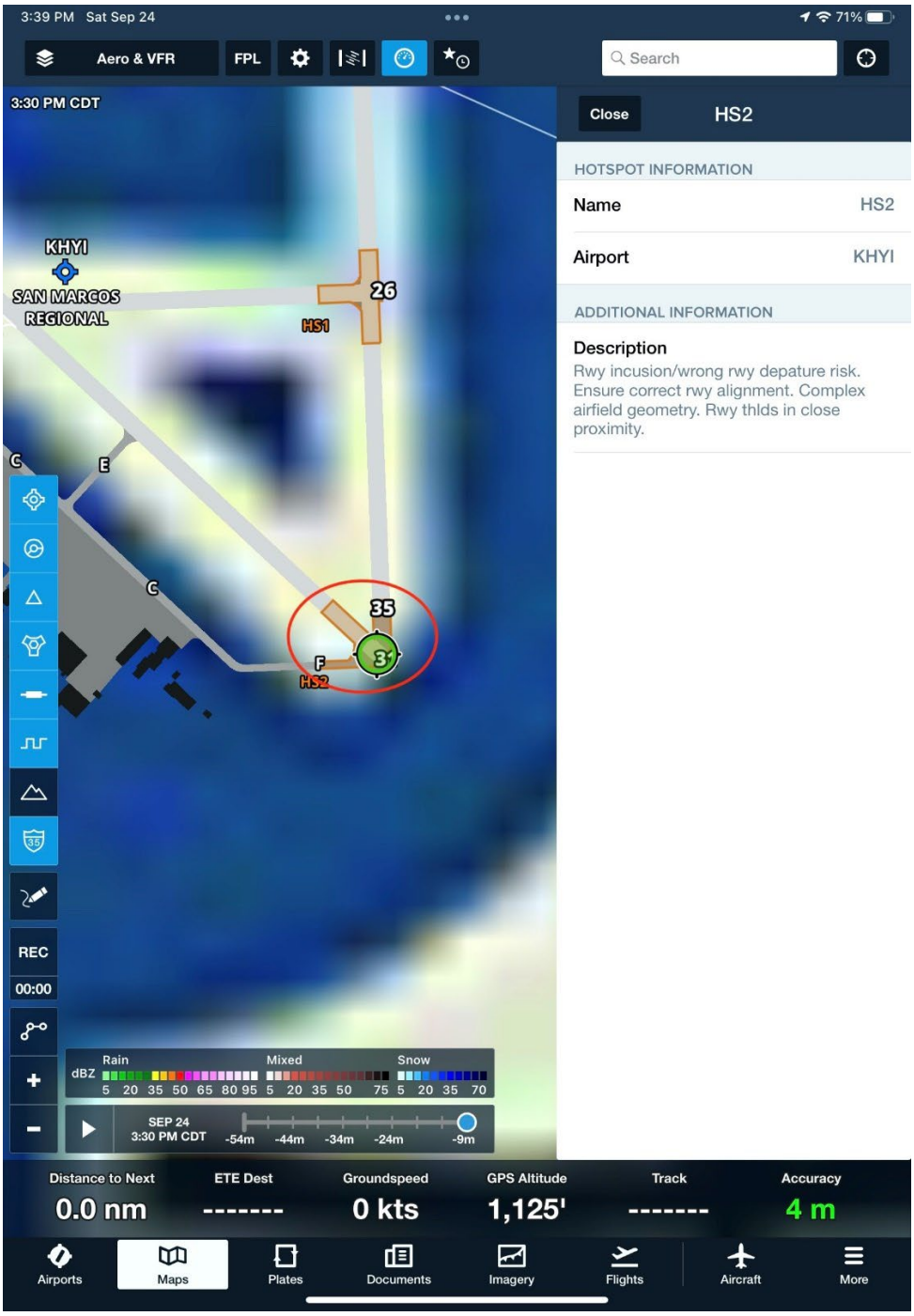
Mitigation #1 – Taxi with an airport diagram visible. There are multiple ways to get to the airport diagram. I prefer using the Plates tab and Flight Binders. Import from the map and tap APT to select the best diagram. Airports with Hot Spots have them annotated in orange/brown. You can also select the Hot Spot page under APT to read about the hot spot dangers. (Hot Spots have recently been standardized – see https://www.faa.gov/hot-spot

Mitigation #2 - An alternative is to use the Maps tab and zoom in to the airport. Here you can tap on the Hot Spot to get the associated information displayed in the sidebar.



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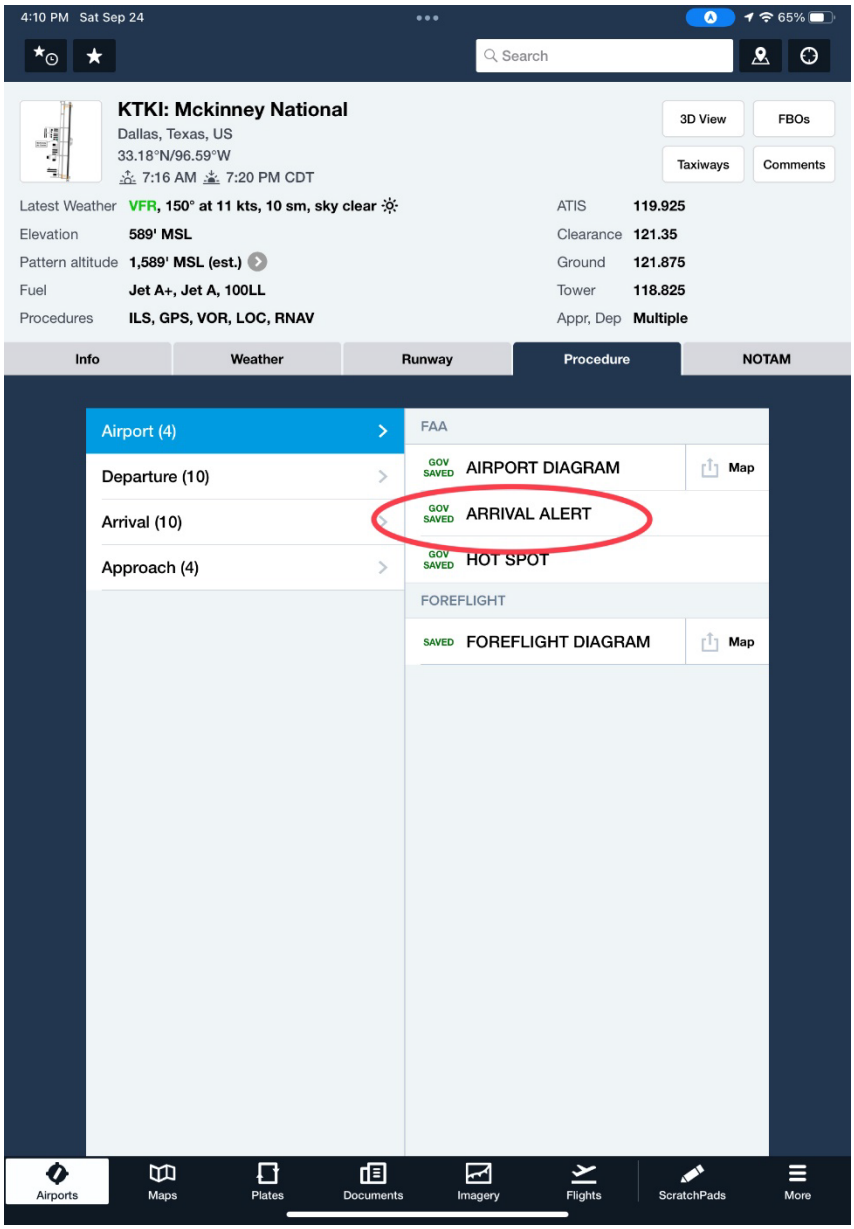
Mitigation #3 - ForeFlight has recently added the FAA Arrival Alert Notices. (See https://www.faa.gov/newsroom/arrival-alert-notices), they can be found where airport diagrams are found and show runways with a high misalignment risk.



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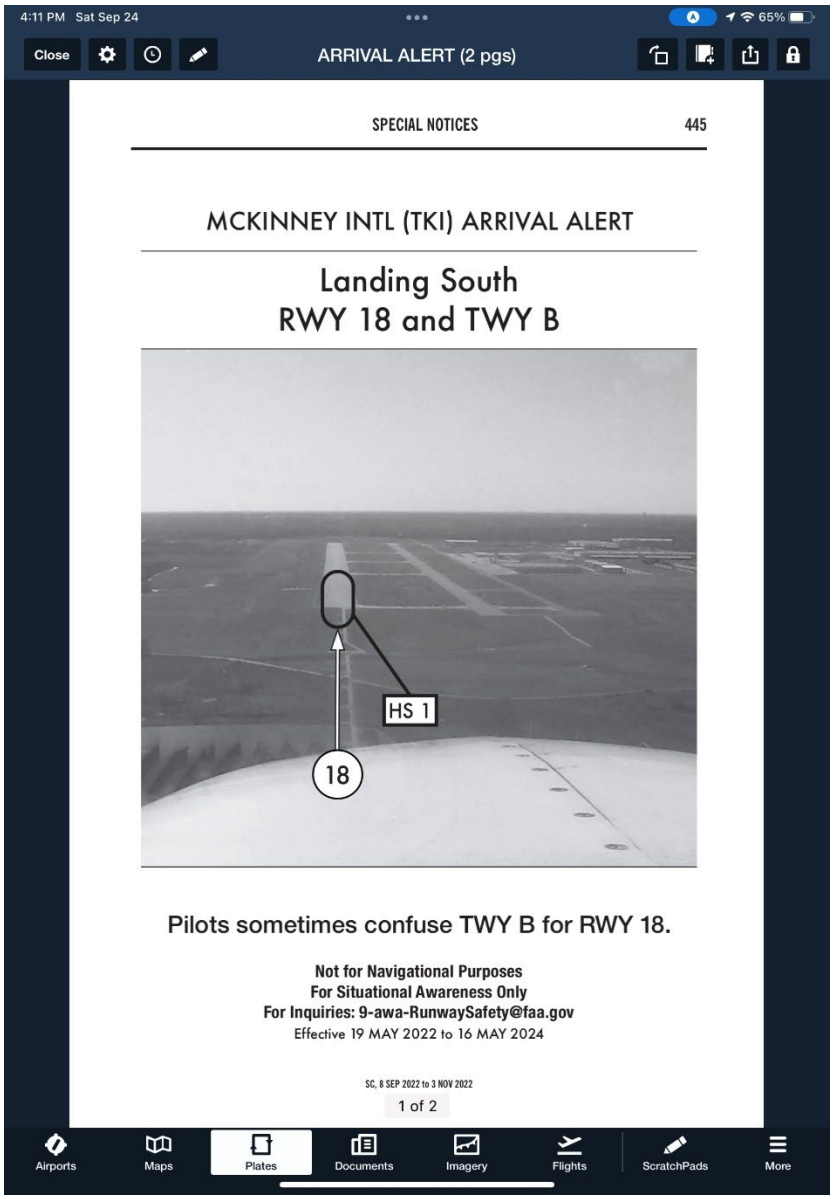

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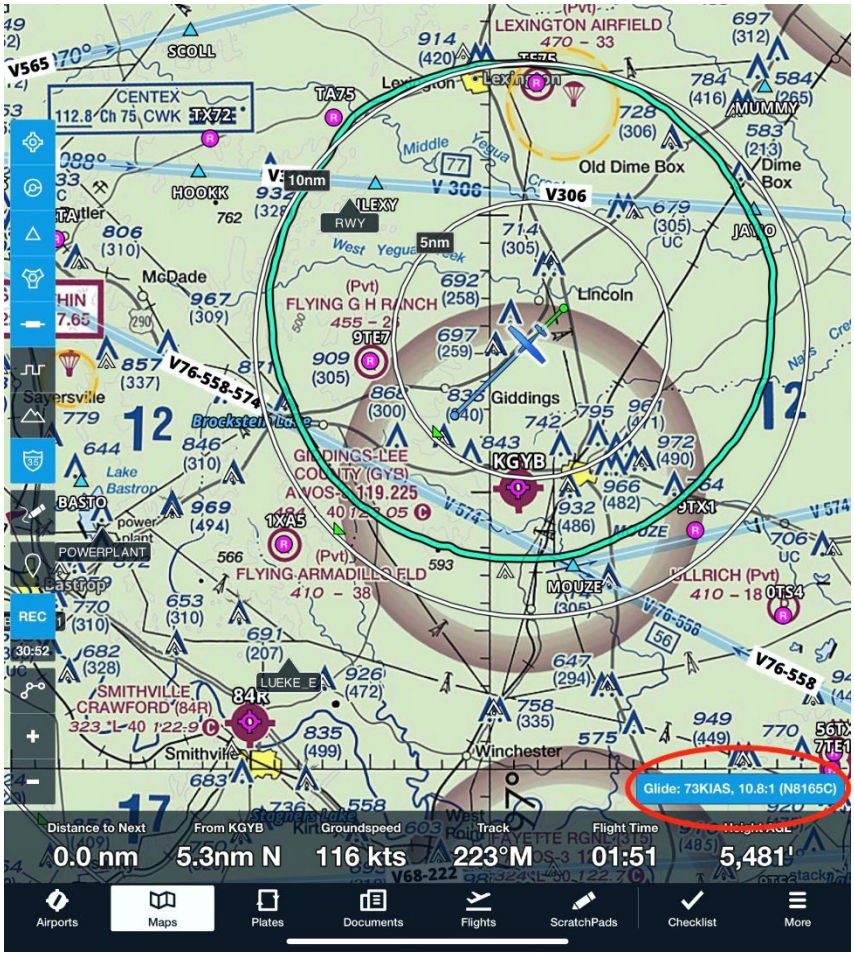
Risk #2 – Engine out

Mitigation #1 – Use the Glide Advisor to know at a glance how far you can glide in an engine out scenario. Make sure your aircraft profile has the correct glide speed and glide ratio entered, then enable Glide Advisor under Maps – Settings. You can reach any spot within the green ring. The ring is not a perfect circle because it accounts for wind and terrain elevation changes.



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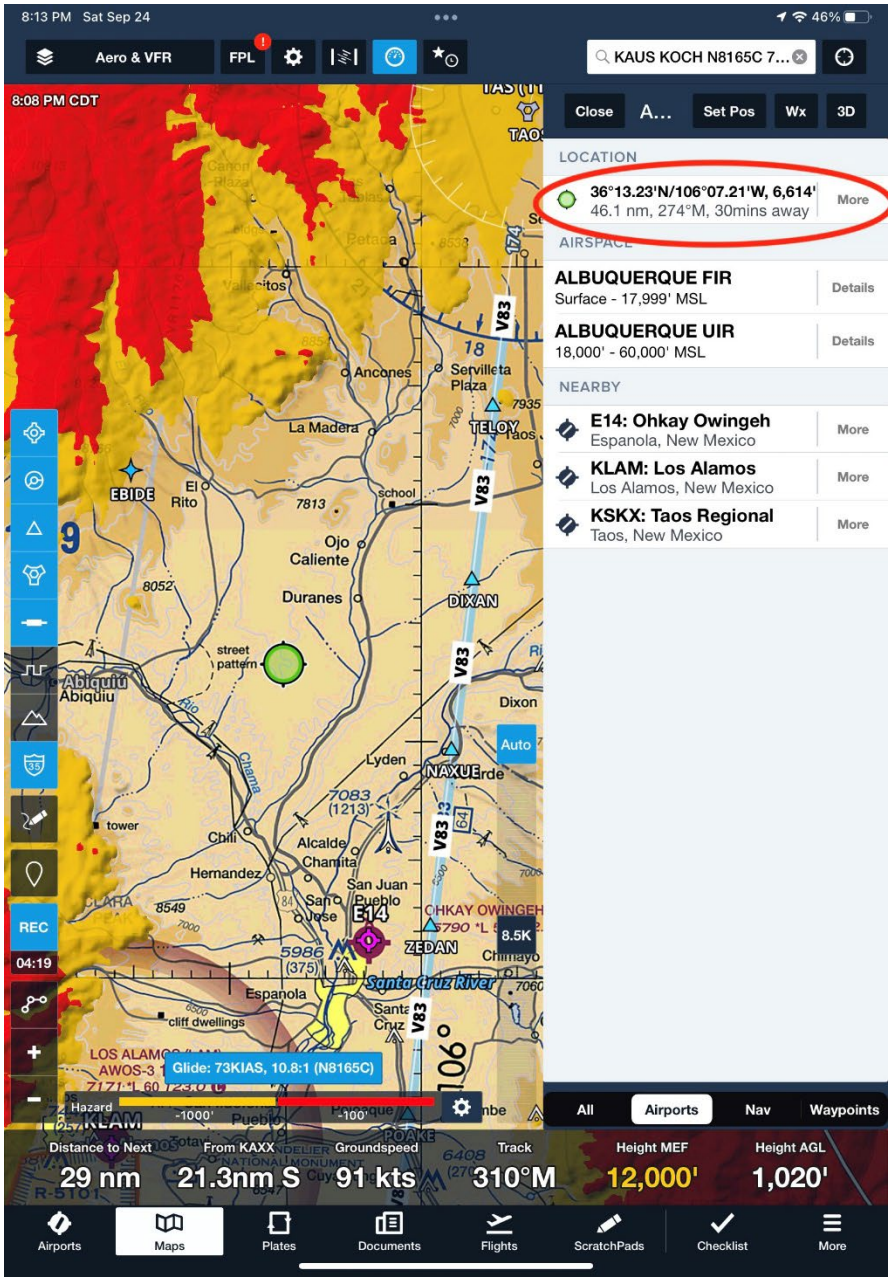
Risk #3 – Terrain and obstacles when flying low altitude.

Mitigation #1 – While planning a low altitude flight you can determine terrain elevation by looking for elevation markers or doing the tower MSL minus AGL math, but an easier way is to just tap anywhere on the map where you will be flying and read the terrain elevation next to the coordinates.



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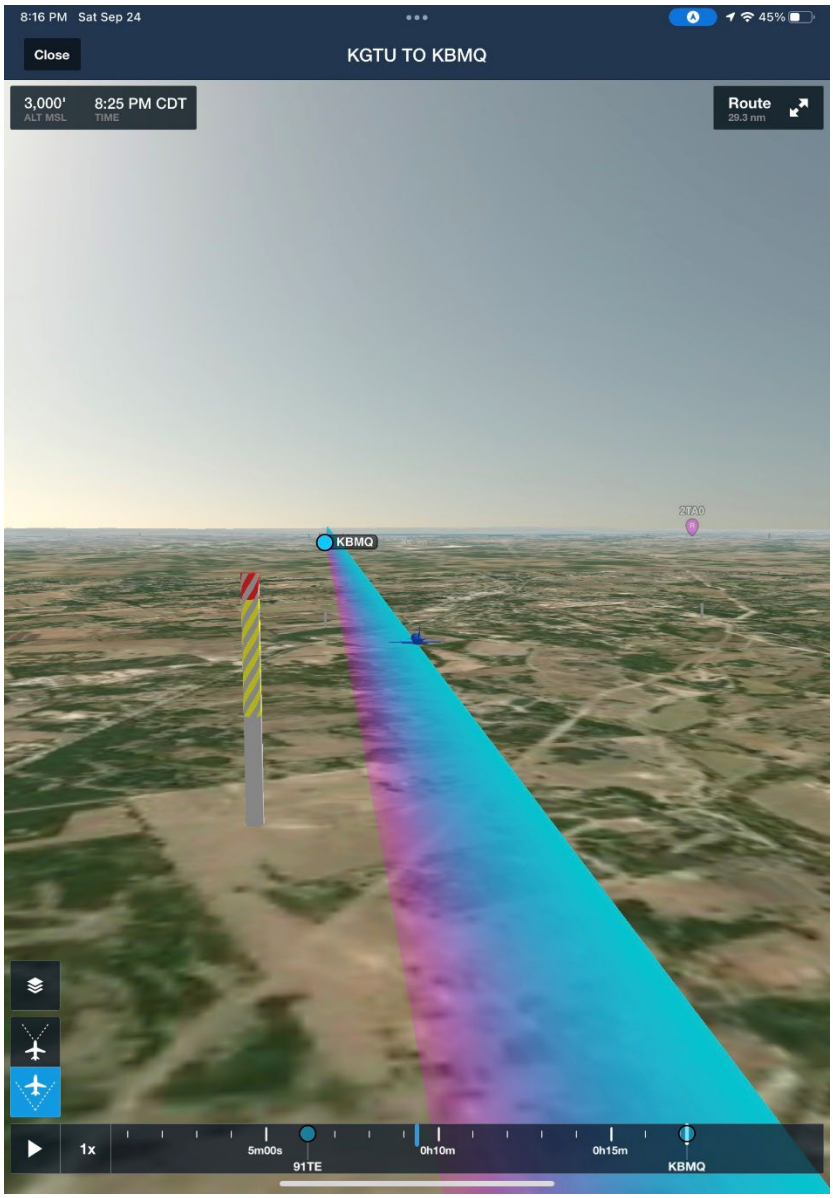
Mitigation #2 – After planning your route, perform a 3D route preview. From the maps tab, tap on the globe icon and fast forward through your route. With the correct layers enabled, you can see weather, airports, and obstacles. A tall obstacle near your route will really stand out in this view.



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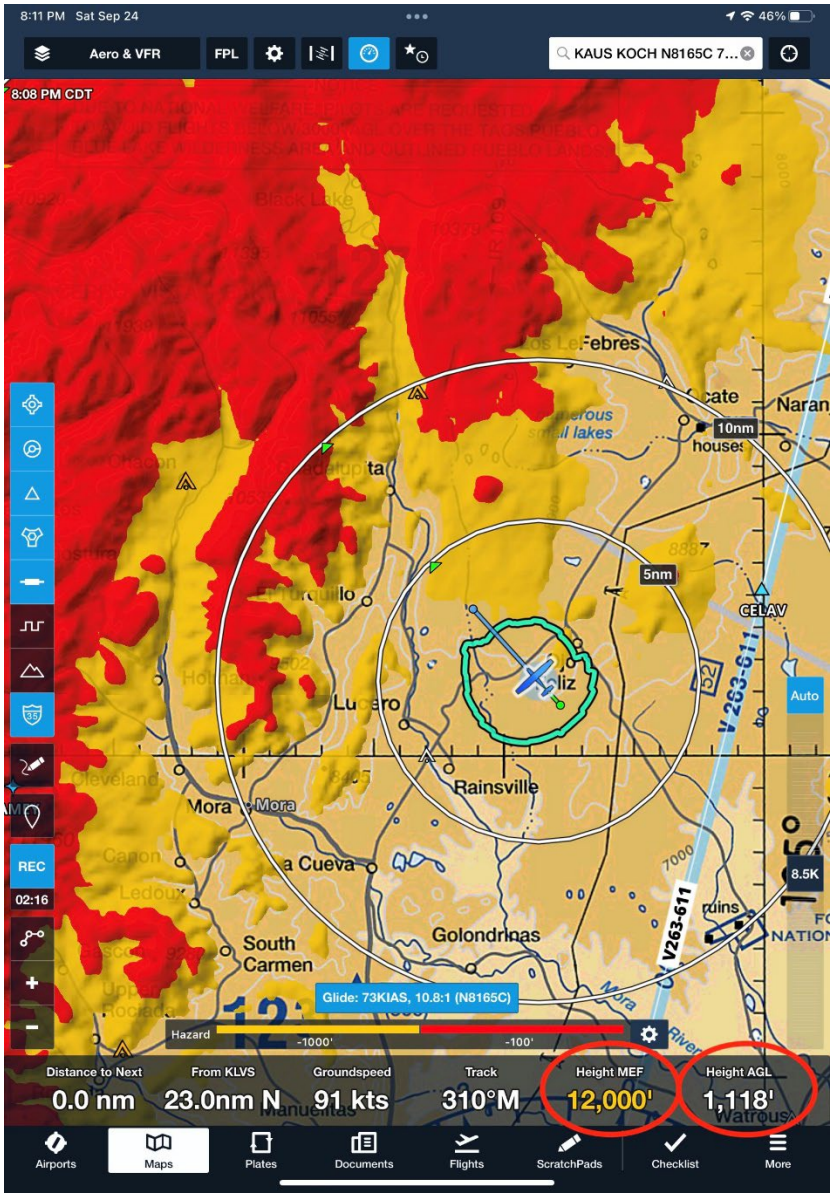
Mitigation #3 – Use your instruments. ForeFlight provides multiple instruments along the bottom of the map. Two that are particularly important for low altitude flying are the Height AGL instrument and the Height MEF. Height AGL uses terrain data and your GPS altitude to determine your above ground altitude. Height MEF, uses chart data and your current position to determine your local Maximum Elevation Figure. Add one thousand feet to this number and you'll be guaranteed sufficient obstacle and terrain clearance in that grid.



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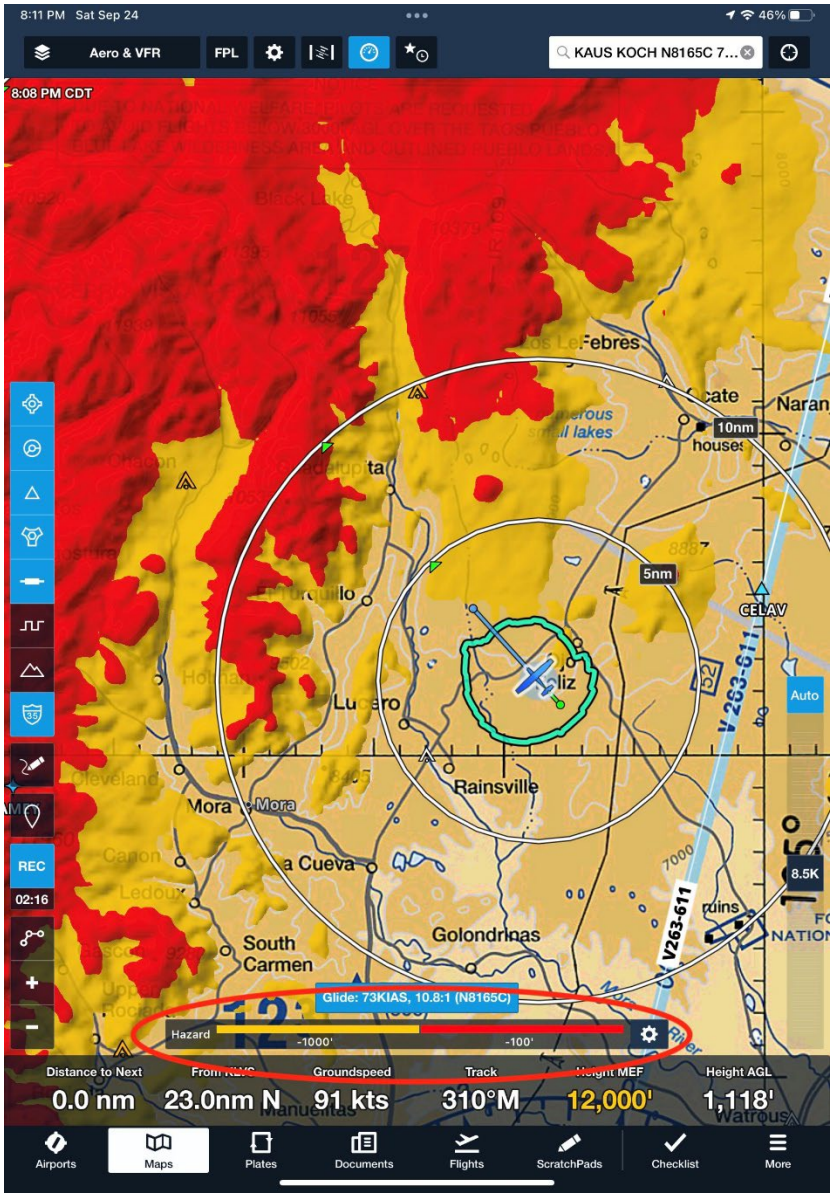
Mitigation #4 – The Hazard Advisor can be enabled from the layer selector. With this enabled, there will be yellow and red shadings to warn you of terrain that is within 100'- 1000' below your altitude or 100' below to above your altitude. Hazard advisor can also be used in conjunction with the Profile view to give you a more complete picture of the terrain around you and ahead of you.



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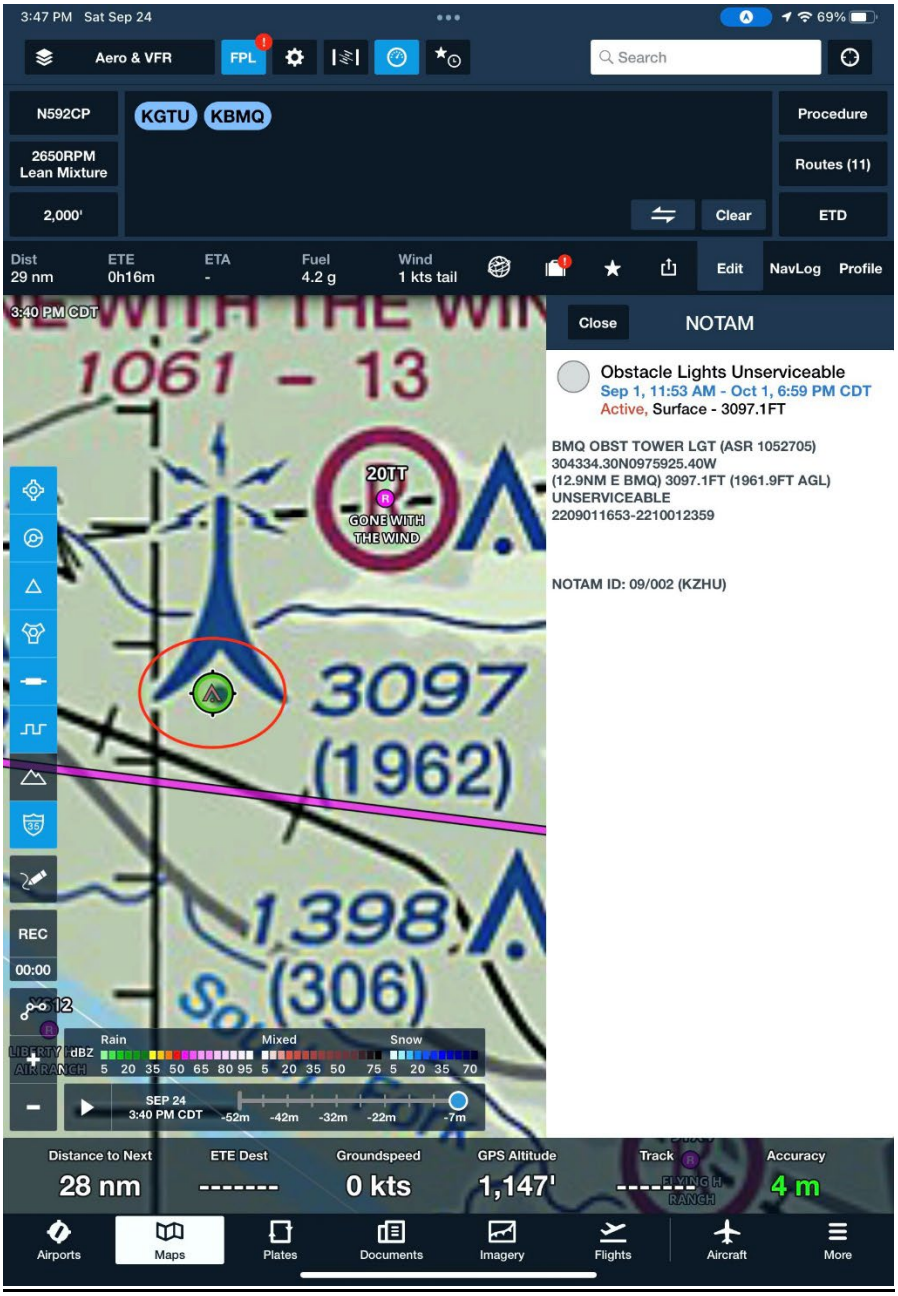
Mitigation #5 – Another layer that can be helpful is the obstacles layer. If you prefer to fly with the Aeronautical map instead of a sectional, the obstacle layer can provide great visibility to towers in the vicinity of your route. Tapping a tower gives extra information about it. Enabling the Notam layer will also show some pink colored towers. Tapping these will show Notams associated with the tower. In this example, it is certainly good to know that a 2,000' tower is temporarily unlit.



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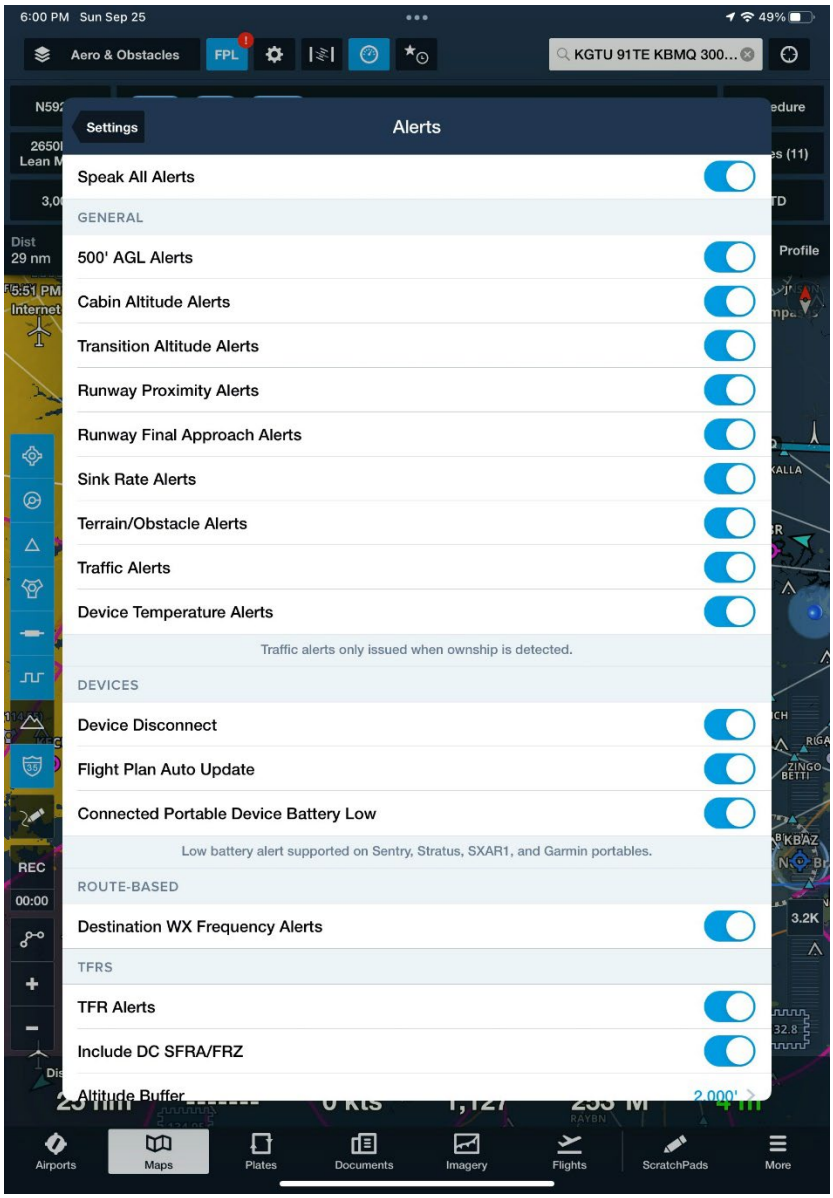
Mitigation #6 – Tap More, Settings, Alerts and enable Terrain/Obstacle Alerts. This will provide visual and audio alerts when approaching terrain and obstacles. Also, a great mitigation step for several other risks--turn on as many alerts as appropriate for your mission and remember to pair your headset with your iPad.



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