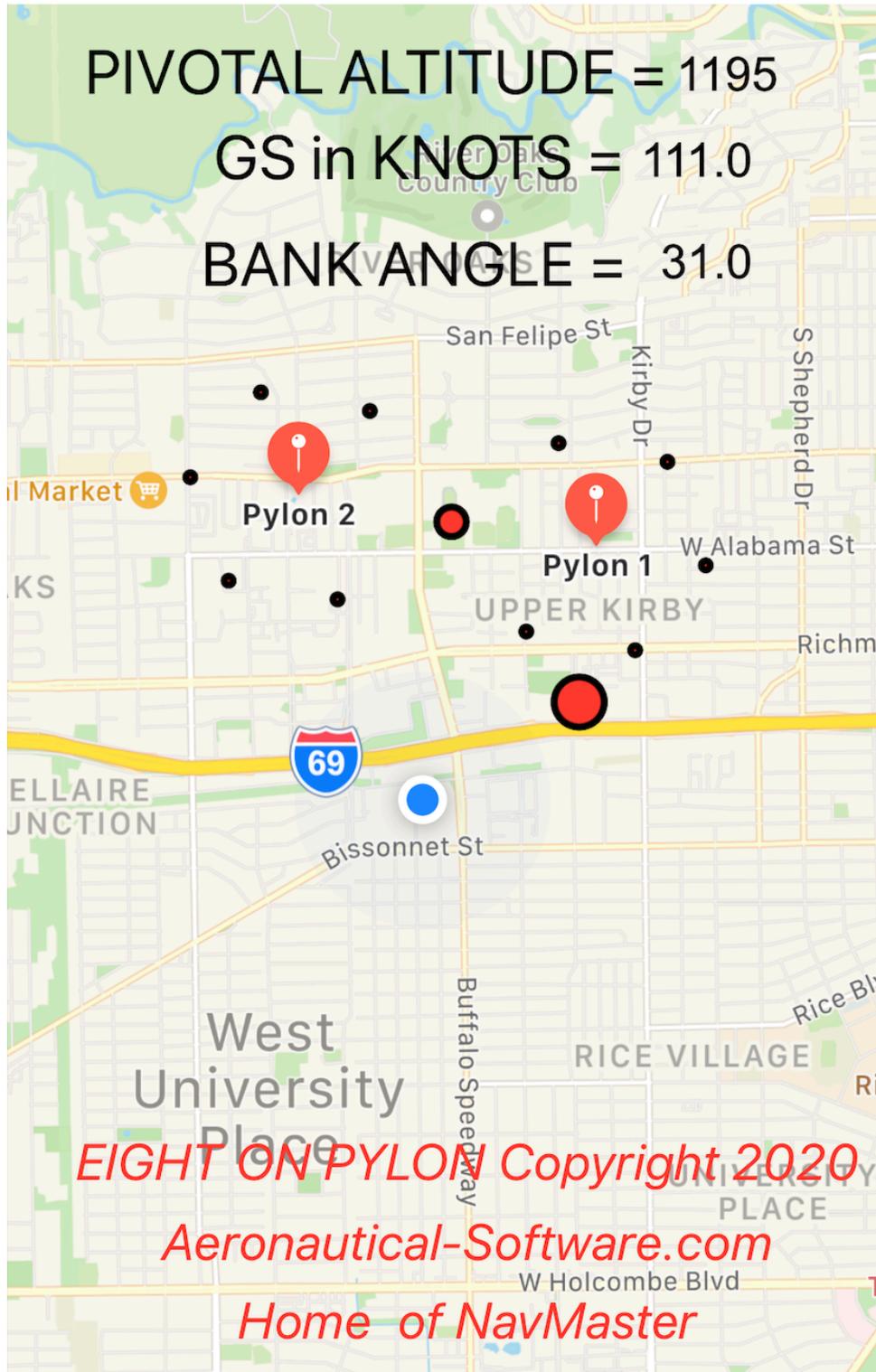


EIGHT ON PYLON



The “Eight On Pylon” App is designed to assist in both flying and teaching two flight maneuvers (eights around pylons and eights on pylons). “Eights Around Pylons” has the objective to maintain a specific altitude while flying a figure eight pattern around two ground positions (pylons). However, “Eights On Pylons” objective is not to maintain a specific altitude but to vary both altitude and bank angle so that the pylon remains fixed in place when viewed from the cockpit. It is interesting to note that when the maneuver is flown correctly, the track over the ground is very similar.

While Eights Around Pylons is easy to fly, Eights On Pylons is one of the most difficult maneuvers in the Commercial Pilot syllabus. Typically, the student pilot must determine the pivotal altitude during the preflight briefing using the formula ($\text{downwind ground speed squared divided by } 11.30 \text{ plus local elevation}$). While flying at this pre-calculated pivotal altitude and flying down wind, the pilot selects the two pylon positions by placing a finger on the chosen locations. Six black dots will appear at 60 degree intervals and at appropriate radius around each pylon. Additionally, two red dots are placed in a manner to establish a proper entry. Ground speed, recommended bank, pivotal altitude are continuously displayed on the moving map. Note that the bank angle is limited to 45 degrees and the minimum pivotal altitude is local elevation + 500 feet.

Step-By-Step Instructions:

- 1) Compute anticipated pivotal altitude based on current winds in practice area.
- 2) Position aircraft upwind of your chosen pylons while headed downwind.
- 3) Start the “Eight On Pylon” application.
- 4) Select your two pylons by putting your finger on the map display until a pin appears. This will determine the radius of turn and baseline between the pylons as well as pylon positions.
- 5). Insert the local flying area elevation into the input screen.
- 6). Proceed from the large red dot to the small red dot. This will establish a track that is 45 degrees from the baseline. After the small red dot (center of eight), fly dot to dot around the pylons.

