

PAVE Acronym for Risk Analysis: Pilot, Aircraft, Environmental Factors, External Pressures

- Pilot
 - Employee flying boss for work reasons
 - CFR 61.113 violation
 - Private Pilot may not fly for compensation and must pay his pro-rata share of the flying costs (fuel, rental, etc.), the boss is paying fully for the rental
 - Pilot must also share a common interest in flying the aircraft. In this scenario the sole interest is for the well being of the company. (build flight time)
 - Tell the boss that the flight is possible if I pay at least 33% of the costs (rental, fuel, etc.) since there are 3 people on board
 - Aerial photography implies that the company is paying me for the flight time therefore violation of CFR 61.113
 - To carry passengers, need to be passenger current, valid for 90 days
 - 14 CFR 61.56, 61.57 violation
 - I must have completed 3 takeoffs and landings solo in an aircraft of the same category, class, and type if required
 - This implies night flying due to a long flight time each way and required stops so night currency of 3 takeoffs and landings to full stop during night solo is also required.
 - I am not comfortable flying a very long cross country like this one since I have not flown a cross country flight since I got my PPL, therefore it is unsafe to jump to such a long cross country flight without doing a shorter one (planning at the minimum) first
 - Wants to fly as low as possible for pictures
 - 14 CFR 91.119 potential violation
 - Not safe to fly very low since there is little time to react if anything goes wrong. There are minimum altitude requirements so since this is a housing area, I assume is a town nearby and I need to stay above 1000 ft around 2000 ft of the highest obstacle.
- Aircraft
 - The aircraft is a C172, therefore can only hold a max of 4 hours of fuel. If the flight is 4 hours alone, and there are bravos in between which increase flight time, need to stop to refuel. This increases time.
 - 14 CFR 19.151 violation
 - Need to keep a minimum fuel level, 45 minutes of reserve for night and 30 mins reserve for day
 - Carrying Maximum baggage
 - Makes the amount of fuel that the plane can carry low
 - The aircraft is heavy and therefore needs a longer ground roll on takeoff and landing. It also performs slightly more sluggishly
 - CG/CP will be possibly maxed out in the operating range since the weight is shifted back into the baggage compartment (See W&B)

- Environmental Factors
 - Thunderstorms in the area
 - Implies an unstable atmosphere
 - Lots of turbulence, wind shear (flying low to the ground during this is very bad), heavy winds, large updrafts (this is expected from towering cumulonimbus clouds)
 - Lightning, dangerous for aircraft
 - Probably a very low cloud ceiling and poor visibility which is never allowed for VFR operations
- External Pressures
 - Boss wants everything to be done within a day
 - Very long duty period, I will be the sole pilot for probably around 10 hours that day, therefore I will be tired and not as sharp as I would be if I were to be fresh when flying.
 - This trip is being done for the boss so therefore there is job pressure to ensure that the boss is pleased by the outcome of the flight, putting additional pressure on me.
 - Flying through/near bravo or other complex airspace
 - There will be lots of other most likely faster aircraft and I will always need to be extremely alert to aircraft moving around near me. I will have pressure from the other aircraft around me and to not accidentally bust any airspace.