

6. Climb gradients may be specified only to an altitude/fix, above which the normal gradient applies.

An ATC–required altitude restriction published at a fix, will not have an associated climb gradient published with that restriction. Pilots are expected to determine if crossing altitudes can be met, based on the performance capability of the aircraft they are operating.

EXAMPLE–

“Minimum climb 340 FPNM to ALPHA.” The pilot climbs at least 340 FPNM to ALPHA, then at least 200 FPNM to MIA.

7. A Visual Climb Over Airport (VCOA) procedure is a departure option for an IFR aircraft, operating in visual meteorological conditions equal to or greater than the specified visibility and ceiling, to visually conduct climbing turns over the airport to the published “at or above” altitude. At this point, the pilot may proceed in instrument meteorological conditions to the first en route fix using a diverse departure, or to proceed via a published routing to a fix from where the aircraft may join the IFR en route structure, while maintaining a climb gradient of at least 200 feet per nautical mile. VCOA procedures are developed to avoid obstacles greater than 3 statute miles from the departure end of the runway as an alternative to complying with climb gradients greater than 200 feet per nautical mile. Pilots are responsible to advise ATC as early as possible of the intent to fly the VCOA option prior to departure. Pilots are expected to remain within the distance prescribed in the published visibility minimums during the climb over the airport until reaching the “at or above” altitude for the VCOA procedure. If no additional routing is published, then the pilot may proceed in accordance with their IFR clearance. If additional routing is published after the “at–or–above” altitude, the pilot must comply with the route to a fix that may include a climb–in–holding pattern to reach the MEA/MIA for the en route portion of their IFR flight. These textual procedures are published in the Take–Off Minimums and (Obstacle) Departure Procedures section of the Terminal Procedures Publications and/or appear as an option on a Graphic ODP.

EXAMPLE–

TAKEOFF MINIMUMS: Rwy 32, standard with minimum climb of 410’ per NM to 3000’ or 1100–3 for VCOA.

VCOA: Rwy 32, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Broken Bow Muni/Keith Glaze Field at or above 3500’ before proceeding on course.

f. Who is responsible for obstacle clearance? DPs are designed so that adherence to the procedure by the pilot will ensure obstacle protection. Additionally:

1. Obstacle clearance responsibility also rests with the pilot when he/she chooses to climb in visual conditions in lieu of flying a DP and/or depart under increased takeoff minima rather than fly the climb gradient. Standard takeoff minima are one statute mile for aircraft having two engines or less and one–half statute mile for aircraft having more than two engines. Specified ceiling and visibility minima will allow visual avoidance of obstacles during the initial climb at the standard climb gradient. When departing using the VCOA, obstacle avoidance is not guaranteed if the pilot maneuvers farther from the airport than the published visibility minimum for the VCOA prior to reaching the published VCOA altitude. DPs may also contain what are called Low Close in Obstacles. These obstacles are less than 200 feet above the departure end of runway elevation and within one NM of the runway end and do not require increased takeoff minimums. These obstacles are identified on the SID chart or in the Take–off Minimums and (Obstacle) Departure Procedures section of the U. S. Terminal Procedure booklet. These obstacles are especially critical to aircraft that do not lift off until close to the departure end of the runway or which climb at the minimum rate. Pilots should also consider drift following lift–off to ensure sufficient clearance from these obstacles. That segment of the procedure that requires the pilot to see and avoid obstacles ends when the aircraft crosses the specified point at the required altitude. In all cases continued obstacle clearance is based on having climbed a minimum of 200 feet per nautical mile to the specified point and then continuing to climb at least 200 foot per nautical mile during the departure until reaching the minimum en route altitude unless specified otherwise.

2. ATC may vector the aircraft beginning with an ATC–assigned heading issued with the initial or takeoff clearance followed by subsequent vectors, if required, until reaching the minimum vectoring altitude by using a published Diverse Vector Area (DVA).