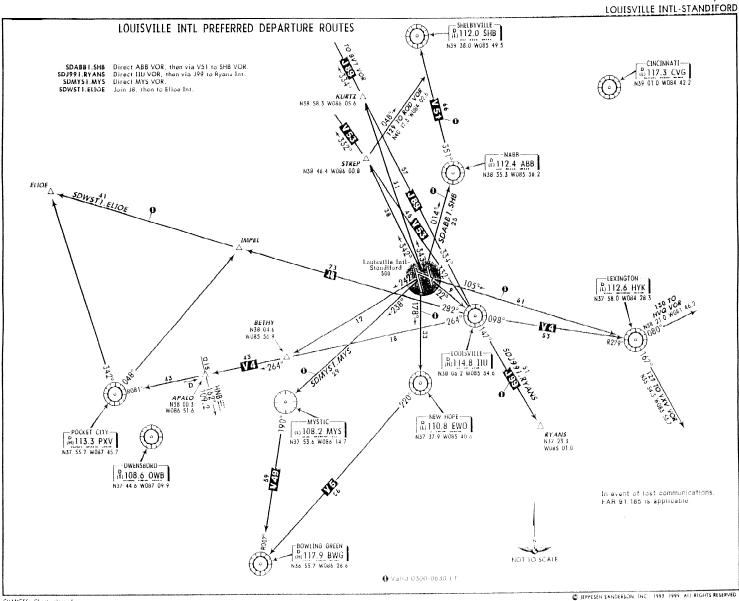
LOUISVILLE, KY

STANDIFORD Departure (R) West 123.67 LOUISVILLE INTL-STANDIFORD East 132.07 DERBY CITY ONE DEPARTURE (VECTOR) -BOILER-Climb on runway heading or as assigned for vectors to join filed route. **MAINTAIN** 5000' (H) 115.1 BVT or assigned lower altitude. Expect clearance N40 33.4 W087 04.2 to requested altitude/flight level ten minutes after departure. -BRICKYARD-(H) 116.3 VHP N39 48.9 W086 22.1 -SHELBYVILLE-TERRE HAUTE-(H) 115.3 TTH ជ<u>ំ 112.0 SHB</u> NOT TO SCALE N39 29.3 W087 14.9 N39 38.0 W085 49.5 CINCINNATI-<u>பி 17.3 CVG</u> N39 01.0 W084 42.2 R-3403B -HOOSIER R-3403A 心 110.2 OOM N39 08.6 W086 36.8 Louisville Intl-Standiford -LOUISVILLE-(H) 114.8 IIU POCKET CITY-(H) 113.3 PXV -MYSTIC-N38 06.2 W085 34.6 (L) 108.2 MYS N37 55.7 W087 45.7 N37 53.6 W086 14.7 R-3704A 心112.6 HYK OWENSBORO-ரி 108.6_OWB R-3704B N37 58.0 W084 28.3 N37 44.6 W087 09.9 -BOWLING GREEN--LONDON-(₽)117.9 BWG பே 116.1 LOZ டு 109.8 CCT N36 55.7 W086 26.6 N37 02.0 W084 06.6 N37 22.9 W087 15.8 -LIVINGSTON-ப் 108.4 LVT N36 35.1 W085 10.0

LOUISVILLE, KY



CHANGES: Chart relssued.

Selected Flap Setting	Minimum Speed Initial Flap Retraction After Takeoff	For Gross Weights Below 154,500 lbs.	For Gross Weights Between 154,501 lbs. and 176,000 lbs.	For Gross Weights Between 176,000 lbs. and 191,000 lbs.	For Gross Weights Above 191,000 lbs.
25	V2+10 knots	140 knots	150 knots	160 knots	170 knots
15	V2+10 knots	150 knots	160 knots	170 knots	180 knots
□ 5°	V2+30 knots	160 knots	170 knots	180 knots	190 knots
→ 2		190 knots	200 knots	210 knots	225 knots
□ 0		200 knots	210 knots	220 knots	235 knots
Final Segment Climb		200 knots	210 knots	220 knots	235 knots

NOTE: Full maneuverability is available at above airspeed (30 degrees bank). Limit bank angle to 15 degrees until these airspeeds are attained. *Full maneuverability is also available with flaps 5 at V2+10 knots.

Set climb thrust

· Accelerate to climb speed

Complete After Takeoff Checklist

Lower nose to maintain 500-1000 FPM climb

· Retract flaps on flap/speed schedule

 (-100/-200) At 200-235 knots. set 1.7 EPR for noise abatement

· Set climb thrust

Accelerate to climb speed

3,000 ft AGL

Complete After Takeoff Checklist

When Turn Complete or 1,000 ft AGL

Close in turn to clear noise critical area Maintain:

· Takeoff flap setting

V2+10 kt

Maximum bank 30 degrees

1,000 ft AGL

Note: (-100/-200) If expedited climb is required or severe icing conditions exist, set climb thrust after flaps are retracted.

Set takeoff thrust at 60-80 kts

N1's checked

3,000 ft AGL

V1/VR

Rotate smoothly to proper attitude

V2

 Positive rate of climb

V2+10 kts

Gear up

Straight climbout maintain:

Takeoff flap setting

V2+10 kts

Selected Flap Setting	Minimum Speed Initial Flap Retraction After Takeoff	For Gross Weights Below 154,500 lbs.	For Gross Weights Between 154,501 lbs. and 176,000 lbs.	For Gross Weights Between 176,000 lbs. and 191,000 lbs.	For Gross Weights Above 191,000 lbs.
25	V2+10 knots	140 knots	150 knots	160 knots	170 knots
15	V2+10 knots	150 knots	160 knots	170 knots	180 knots
□ 5*	V2+30 knots	160 knots	170 knots	180 knots	190 knots
-2		190 knots	200 knots	210 knots	225 knots
□ 0		200 knots	210 knots	220 knots	235 knots
Final Segment Climb		200 knots	210 knots	220 knots	235 knots

• At 3,000 feet AGL, lower nose to accelerate and retract flaps on flap/speed schedule.

Accelerate to climb speed

Complete After Takeoff Checklist

NQTE: Full maneuverability is available at above airspeed (30 degrees bank). Limit bank angle to 15 degrees until these airspeeds are attained

*Full maneuverability is also available with flaps 5 at V2 + 10 knots.

NOTE: No noise abatement climb required if an emergency or severe icing condition occurs.

At 3,000 feet AGL, lower nose to

accelerate and retract flaps on

3,000 ft AGL 1,500 ft AGL

 At 1,500 feet AGL, set climb thrust and climb at V2+10 to 3,000 feet AGL

Close in turn to clear noise critical area Maintain:

Takeoff flap setting

• V2+10 kt

Maximum bank 30 degrees

flap/speed schedule. Accelerate to climb speed Complete After Takeoff Checklist 3,000 ft AGL

Set takeoff thrust at 60-80 kts

N1's checked

V1/VR

Rotate smoothly to proper attitude

• V2

 Positive rate of climb

V2+10 kts

• Gear up

Straight climbout maintain:

Takeoff flap setting

V2+10 kts

Stabilized Approach Criteria

All aircraft must fly a stabilized approach to landing. The stabilized approach criteria are listed below:

- 1. Airspeed within +10/-5 knots of target
- 2. Glide slope within 1 dot of centered
- 3. Sink rate no greater than 1000 feet per minute
- 4. Aircraft in landing configuration and engines spooled in order that the above conditions can be maintained
- 5. Aligned with confines of runway by 200 feet AGL

These criteria are encouraged to be complied with by 1000 feet AGL, mandatory by 500 feet AGL (VMC) and encouraged by 1500 feet AGL, mandatory by 1000 feet AGL (IMC).

Aviation & Air Traffic Control Terminology

Aircraft Approach Category – a grouping of aircraft based on approach speeds. Approach speed categories are as follows:

A=speed less than 91 knots.

B=speed 91 knots or more but less than 121 knots.

C=speed 121 knots or more but less than 141 knots.

D=speed 141 knots or more but less than 166 knots.

E=speed 166 knots or more.

Aircraft Classes-for the purpose of wake turbulence separation minima, ATC classifies aircraft as heavy, large, and small as follows:

Heavy=aircraft capable of takeoff weights of 255,000 lbs. or more.

Large=aircraft capable of takeoff weights of more than 41,000 lbs. but less than 255,000 lbs.

Small=aircraft of 41,000 lbs. or less maximum certificated takeoff weight.

Airport Surveillance Radar (ASR)-approach control radar used to detect aircraft in the terminal area.

Air Route Traffic Control Center (ARTCC)-commonly referred to as "center", are facilities established to provide air traffic control outside the terminal area during the enroute phases of flight.

Airway-a control area or portion thereof established in the form of corridor equipped with radio navigational aids.

Alternate Airport-an airport at which an aircraft may land if a landing at the intended airport becomes inadvisable.

Approach Sequence-the order in which aircraft are positioned while on approach.

Area Navigation (RNAV)-a method of navigation which permits aircraft operation on any desired flight path within the coverage of the station referenced navigation aids or within the limits of the capability of self-contained aids.

ATC-Air Traffic Control.

Automatic Terminal Information Service (ATIS)-the continuous broadcast of recorded non-control information in selected terminal areas (broadcast includes, wind, weather, runway information, etc.).

Back-Taxi-term used by air traffic controllers to taxi an aircraft on the runway opposite to the traffic flow.

Ceiling-the heights above the earth's surface of the lowest layer of clouds or obscuring phenomena.

Crosswind-a wind that is not parallel to the runway or the path of an aircraft.

Crosswind Component-the wind component measured in knots at 90 degrees to the longitudinal axis of the runway.

Decision Height-the height at which a decision must be made during an ILS, MLS, or PAR instrument approach to either continue the approach or to execute a missed approach.

Distance Measuring Equipment (DME)-equipment used to determine distance from the aircraft to the navigational aid.

Flight Level-level of constant pressure stated in 3 digits that represent hundreds of feet (e.g., flight level 250 equals 25,000 feet).

Flight Management System (FMS)-a computer system with pre-programmed routes that is constantly updated with position information by referencing conventional navigational aids.

Glide Slope-provides vertical guidance for aircraft during approach and landing. This guidance can be based on electronic navigational aids (ILS), visual aids (VASI), or precision approach radar (PAR).

Global Positioning System (GPS)-satellite based navigation system that provides highly accurate position, velocity, and navigation information.

Ground Speed-speed of an aircraft in relation to the surface of the earth.

ILS Categories:

Category I-an approach procedure that provides for approach to a height above touchdown of not less than 200 feet and runway visual range of not less than 1800 feet.

Category II- an approach procedure that provides for approach to a height above touchdown of not less than 100 feet and runway visual range of not less than 1200 feet.

Category IIIA- an approach procedure that provides for approach without decision height minimum and runway visual range of not less than 700 feet.

Category IIIB- an approach procedure that provides for approach without decision height minimum and runway visual range of not less than 150 feet.

Instrument Flight Rules (IFR)-rules governing the procedures for conducting instrument flight.

Instrument Landing System (ILS)-a precision instrument approach system that provides horizontal and vertical guidance during the approach to landing (see Localizer and Glide Slope).

Instrument Meteorological Conditions (IMC)-meteorological conditions expressed in terms of visibility, distance from clouds, and ceiling less than the minima prescribed for visual meteorological conditions.

Inertial Navigation System (INS)-a self-contained navigation system requiring no information from external references. The system provides information in response to signals resulting from inertial effects on components within the system.

Intersection-a point defined by any combination of courses, radials, or bearings of two or more navigational aids.

Land and Hold Short Operations (LAHSO)-operations which include simultaneous takeoffs and landings on intersecting runways when a landing aircraft is able and is instructed by the control tower to hold short of the intersecting runway, taxiway, or designated hold short point.

Local Area Augmentation System (LAAS)-a network of ground reference stations that complements WAAS and augments the accuracy of GPS to an accuracy of less than one meter. This allows precision approaches to be completed with GPS to category II and category III minimums.

Localizer-the component of an ILS that provides horizontal guidance to the runway.

Minimums-weather condition requirements established for a particular operation or type of operation.

Missed Approach-a maneuver conducted by a pilot when an instrument approach cannot be completed to a landing.

Navigational Aid-any visual or electronic device airborne or on the surface which provides point-to-point guidance information.

Nondirectional Beacon (NDB)-a UHF radio beacon that allows an aircraft equipped with direction finding equipment to determine the bearing to or from the radio beacon.

Nonprecision Approach-a standard instrument approach procedure in which no electronic glide slope information is provided.

Parallel Runways-two or more runways at the same airport whose centerlines are parallel.

Precision Approach-a standard instrument approach procedure in which electronic glide slope information is provided.

Precision Approach Radar-radar equipment at some ATC facilities that is used to conduct a precision instrument approach wherein the controller issues guidance instructions to the pilot based on the aircraft's position in relation to the final approach course, glide path, and distance to the touchdown point on the runway.

Procedure Turn-a maneuver prescribed when necessary to reverse direction to establish an aircraft on the intermediate approach segment or final approach course.

Radar Vectoring-provision of navigational guidance to aircraft in the form of specific headings based on the use of radar.

Reporting Point-a specified geographical location in relation to which the position of an aircraft can be reported.

Required Navigation Performance (RNP)-a statement of the navigation performance accuracy necessary for operation within a defined airspace.

Runway Visual Range (RVR)-an instrumentally derived value that represents the distance a pilot will see down the runway from the approach end.

Touchdown Zone-the first three thousand feet of the runway beginning at the threshold.

VHF Omni-range (VOR)-a ground based electronic navigation aid transmitting signals 360 degrees in azimuth, oriented from magnetic north.

Visual Flight Rules (VFR)-rules that govern the procedures for conducting flight under visual conditions. Waypoint-a predetermined geographical position used for route/instrument approach definition.

Wide Area Augmentation System (WAAS)-a network of ground reference stations that augments the accuracy of GPS to an accuracy of seven meters vertically and horizontally.