

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

| CITY, STATE | AIRPORT | EFFECTIVE DATE | AMDT NO |
|-------------|------------------|----------------|---------|
| ANDOVER, NJ | AEROFLEX-ANDOVER | 3 JANUARY 2019 | 2 |

TAKEOFF MINIMUMS:

RWY 3: 400-2 1/4.

RWY 21: 500-3 WITH MINIMUM CLIMB OF 220 FT PER NM TO 900 OR 1400-1 1/2 FOR VCOA.

TEXTUAL DEPARTURE PROCEDURES:

RWY 3: CLIMB HEADING 034.36 TO 1200 BEFORE PROCEEDING ON COURSE.

RWY 21: CLIMBING RIGHT TURN ON A HEADING BETWEEN 270 CW TO 030 FROM DEPARTURE END OF RUNWAY TO 1700 BEFORE PROCEEDING ON COURSE. DO NOT EXCEED 150 KIAS UNTIL REACHING 1700 FT MSL.

VISUAL CLIMB OVER AIRPORT:

RWY 21: OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS AEROFLEX-ANDOVER AIRPORT AT OR ABOVE 1800 BEFORE PROCEEDING ON COURSE. DO NOT EXCEED 180 KIAS UNTIL REACHING 1800 FT MSL.

TAKEOFF OBSTACLE NOTES:

NOTE: RWY 03: TREES BEGINNING 13 FT FROM DER, 267 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/678 FT MSL.

TREES BEGINNING 379 FT FROM DER, 163 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/688 FT MSL.

TREES BEGINNING 432 FT FROM DER, 582 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/681 FT MSL.

TREES BEGINNING 662 FT FROM DER, 59 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/704 FT MSL.

TREES BEGINNING 945 FT FROM DER, 170 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/724 FT MSL.

TREE 1228 FT FROM DER, 709 FT LEFT OF CENTERLINE, 100 FT AGL/737 FT MSL.

TREES BEGINNING 1311 FT FROM DER, 66 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/698 FT MSL.

TREES BEGINNING 1510 FT FROM DER, 391 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/744 FT MSL.

TREES BEGINNING 1531 FT FROM DER, 575 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/707 FT MSL.

TREES BEGINNING 1793 FT FROM DER, 502 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/753 FT MSL.

TREES BEGINNING 1898 FT FROM DER, 568 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/730 FT MSL.

TREES BEGINNING 3291 FT FROM DER, 626 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/770 FT MSL.

TREES BEGINNING 3574 FT FROM DER, 198 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/793 FT MSL.

TREES BEGINNING 3856 FT FROM DER, 95 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/819 FT MSL.

POWER LINES AND TRANSMISSION LINES BEGINNING 4555 FT FROM DER, RIGHT AND LEFT OF CENTERLINE, UP TO 184 FT AGL/828 FT MSL.

TREES BEGINNING 5029 FT FROM DER, 90 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/770 FT AGL.

TREES BEGINNING 5123 FT FROM DER, 5 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/792 FT MSL.

NOTE: RWY 21: TREE 68 FT FROM DER, 78 FT LEFT OF CENTERLINE, 100 FT AGL/639 FT MSL.

TREE 152 FT FROM DER, 135 FT RIGHT OF CENTERLINE, 100 FT AGL/668 FT MSL.

TREE 236 FT FROM DER, 349 FT RIGHT OF CENTERLINE, 100 FT AGL/711 FT MSL.

TREES BEGINNING 267 FT FROM DER, 189 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/645 FT MSL.

TREES BEGINNING 320 FT FROM DER, 25 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/740 FT MSL.

TREES BEGINNING 550 FT FROM DER, 85 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/648 FT MSL.

TREE 602 FT FROM DER, 453 FT RIGHT OF CENTERLINE, 100 FT AGL/744 FT MSL.

TREES BEGINNING 686 FT FROM DER, 4 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/767 FT MSL.

TREES BEGINNING 1116 FT FROM DER, 92 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/658 FT MSL.

TREES BEGINNING 1398 FT FROM DER, 99 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/668 FT MSL.

TREES BEGINNING 2048 FT FROM DER, 210 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/675 FT MSL.

TREE 3514 FT FROM DER, 438 FT LEFT OF CENTERLINE, 100 FT AGL/678 FT MSL.

TREE 3598 FT FROM DER, 223 FT LEFT OF CENTERLINE, 100 FT AGL/681 FT MSL.

TREES BEGINNING 3681 FT FROM DER, 9 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/684 FT MSL.

TREE 3964 FT FROM DER, 120 FT LEFT OF CENTERLINE, 100 FT AGL/688 FT MSL.

TREE 4614 FT FROM DER, 127 FT LEFT OF CENTERLINE, 100 FT AGL/704 FT MSL.

TREE 4813 FT FROM DER, 451 FT LEFT OF CENTERLINE, 100 FT AGL/714 FT MSL.

TREES BEGINNING 4896 FT FROM DER, 23 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/730 FT MSL.

TREE 5095 FT FROM DER, 562 FT LEFT OF CENTERLINE, 100 FT AGL/737 FT MSL.

TREE 5179 FT FROM DER, 348 FT LEFT OF CENTERLINE, 100 FT AGL/763 FT MSL.

TREES BEGINNING 5263 FT FROM DER, 133 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/770 FT MSL.

TREE 5462 FT FROM DER, 458 FT LEFT OF CENTERLINE, 100 FT AGL/786 FT MSL.

TREES BEGINNING 5546 FT FROM DER, 30 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/799 FT MSL.

TREE 5745 FT FROM DER, 569 FT LEFT OF CENTERLINE, 100 FT AGL/806 FT MSL.

TREES BEGINNING 5828 FT FROM DER, 140 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/822 FT MSL.

TREES BEGINNING 5996 FT FROM DER, 73 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/780 FT MSL.

TREES BEGINNING 1 NM FROM DER, 37 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/835 FT MSL.

TREES BEGINNING 1 NM FROM DER, 177 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/783 FT MSL.

TREES BEGINNING 1 NM FROM DER, 44 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/839 FT MSL.

QUALITY
3
CHECKED

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CITY, STATE
ANDOVER, NJ

AIRPORT
AEROFLEX-ANDOVER

EFFECTIVE DATE
3 JANUARY 2019

AMDT NO
2

TREES BEGINNING 1 NM FROM DER, 66 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/803 FT MSL.
TREES BEGINNING 1.1 NM FROM DER, 59 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/819 FT MSL.
TREE 1.1 NM FROM DER, 907 FT LEFT OF CENTERLINE, 100 FT AGL/842 FT MSL.
TREES BEGINNING 1.2 NM FROM DER, 50 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/852 FT MSL.
TREE 1.2 NM FROM DER, 1027 FT RIGHT OF CENTERLINE, 100 FT AGL/826 FT MSL.
TREES BEGINNING 1.2 NM FROM DER, 488 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/832 FT MSL.
TREES BEGINNING 1.2 NM FROM DER, 370 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/849 FT MSL.

CONTROLLING OBSTACLES:

RWY 3: 893 FT MSL AAO 410224.00N/0744342.00W (CEILING), 876 FT MSL AAO 410230.00N/0744336.00W (VISIBILITY)

RWY 21: 1033 FT MSL AAO 405745.00N/0744500.00W (CLIMB GRADIENT, CLIMB-TO ALTITUDE); 1027 FT MSL AAO 405803.00N/0744457.00W (CEILING); 981 FT MSL AAO 405754.00N/0744500.00W (VISIBILITY); 1359 FT MSL AAO 405939.00N/0744133.00W (VCA); 1382 FT MSL AAO 405939.00N/0744130.00W (VCOA DIVERSE)

OBSTACLES MANDATING ROUTE DEVELOPMENT:

RWY 3: 983 FT MSL TREE 410045.00N/0744336.00W

RWY 21: 1139 FT MSL AAO 405845.00N/0744336.00W.

REMARKS:

DEPARTURE SERVES AIRPORT WITH CAT A MINIMUMS ONLY.

RWY 21 DEPARTURE PROCEDURE DEVELOPED USING 150 KIAS SPEED RESTRICTION TO REDUCE INITIAL TURN RADIUS AND MINIMIZE REQUIRED CLIMB GRADIENT.

VCOA DEVELOPED USING 180 KIAS SPEED RESTRICTION TO MINIMIZE VCOA FOOTPRINT.

LETTER OF APPROVAL FOR EXCESSIVE CLIMB GRADIENT FOR RWY 3 DISAPPROVED - AFS APPROVED CEILING AND VISIBILITY MINIMUMS ONLY FOR RWY 3 DEPARTURES.

FLIGHT INSPECTED BY:

Digitally signed by

ROBERT G HAMILTON

Sep 25, 2018

OFFICE SYMBOL:

FICO

DATE:

9/15/18

DEVELOPED BY:

Digitally signed by

ROBERT G HAMILTON

Sep 25, 2018

OFFICE SYMBOL:

AJV-5421

DATE:

06/01/2018

APPROVED BY:

Digitally signed by

ROBERT G HAMILTON

Sep 25, 2018

OFFICE SYMBOL:

AJV-5420

DATE:

REQUIRED EFFECTIVE DATE:

ROUTINE

COORDINATED WITH:

A4A **ALPA** **AOPA** **APA** **HAI** **NBAA**

☐☒☒☐☐☒

OTHER:

NY APP CON, APT MGR

QUALITY
3
CHECKED

CHANGES - REASONS:

1. RWY 3 TAKEOFF MINIMUMS CHANGED FROM "500-2 OR STANDARD WITH MINIMUM CLIMB RATE 310 FEET PER NM TO 900" TO "400-2 1/4" - REEVALUATED OEAS APPLYING ADVERSE VEGETATION AND AAO PER 8260.19H; EXCESSIVE CLIMB GRADIENT DUE TO ADVERSE VEGETATION IN THE ICA NECESSITATE USE OF NON-STANDARD/SEE-AND-AVOID TAKEOFF MINIMUMS.
2. RWY 21 TAKEOFF MINIMUMS CHANGED FROM "600-2 OR STANDARD WITH MINIMUM CLIMB RATE 256 FEET PER NM TO 1000" TO "500-3 WITH MINIMUM CLIMB OF 220 FT PER NM TO 900 OR 1400-1 1/2 FOR VCOA" - REEVALUATED OEAS APPLYING ADVERSE VEGETATION AND AAO PER 8260.19H; EXCESSIVE CLIMB GRADIENT DUE TO ADVERSE VEGETATION IN THE ICA NECESSITATE USE OF NON-STANDARD/SEE-AND-AVOID TAKEOFF MINIMUMS WITH A CLIMB GRADIENT AND/OR A VCOA.
3. RWY 21 TEXTUAL DEPARTURE PROCEDURE CHANGED FROM "CLIMB RUNWAY HEADING TO 1400 BEFORE PROCEEDING ON COURSE" TO "CLIMB ON A HEADING BETWEEN 270 CW TO 030 FROM DEPARTURE END OF RUNWAY TO 1700 BEFORE PROCEEDING ON COURSE. DO NOT EXCEED 150 KIAS UNTIL REACHING 1700 FT MSL" - TURN REQUIRED TO ACHIEVE LEAST ONEROUS CLIMB GRADIENT WHILE AVOIDING HIGH TERRAIN/AAO SOUTH AND EAST OF THE AIRPORT.
4. ADDED VCOA DATA/INSTRUCTIONS - FACILITATE DEPARTURE FROM RWY 21 USING STANDARD CLIMB GRADIENT.
5. UPDATED TAKEOFF OBSTACLES NOTES - TO REFLECT NEW OEA EVALUATION RESULTS; APPLIED AJV OBSTACLE GROUPER METHODOLOGY.
6. UPDATED CONTROLLING OBSTACLE DATA - TO REFLECT NEW OEA EVALUATION RESULTS; APPLIED 8260.46F DOCUMENTATION CRITERIA.