

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

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CITY, STATE	AIRPORT	EFFECTIVE DATE	AMDT NO
WESTFIELD/SPRINGFIELD, MA	WESTFIELD-BARNES RGNL	20 JUNE 2019	5

TAKEOFF MINIMUMS:

RWY 20, STANDARD.

RWY 2, 200-1 1/2 OR STANDARD WITH MINIMUM CLIMB OF 210 FT PER NM TO 600, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1200 FT PRIOR TO DER.

RWY 15, 400-1 7/8 OR STANDARD WITH MINIMUM CLIMB OF 460 FT PER NM TO 800.

RWY 33, STANDARD WITH MINIMUM CLIMB OF 340 FT PER NM TO 1800 OR 1500-3 FOR VCOA.

TEXTUAL DEPARTURE PROCEDURES:

RWY 2: CLIMB HEADING 024.21 TO 1700 BEFORE PROCEEDING ON COURSE.

RWY 15: CLIMB HEADING 154.20 TO 1300 BEFORE PROCEEDING ON COURSE.

RWY 20: CLIMB HEADING 204.22 TO 1400 BEFORE PROCEEDING ON COURSE.

RWY 33: CLIMB HEADING 334.21 TO 1500 BEFORE PROCEEDING ON COURSE.

VISUAL CLIMB OVER AIRPORT:

RWY 33: OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS WESTFIELD-BARNES RGNL AIRPORT AT OR ABOVE 1600 BEFORE PROCEEDING ON COURSE.

TAKEOFF OBSTACLE NOTES:

NOTE: RWY 2: TREE 3074 FT FROM DER, 658 FT LEFT OF CENTERLINE, 77 FT AGL/352 FT MSL.
TREE 3231 FT FROM DER, 747 FT RIGHT OF CENTERLINE, 72 FT AGL/350 FT MSL.
TREE 3377 FT FROM DER, 867 FT LEFT OF CENTERLINE, 75 FT AGL/354 FT MSL.
TREE 4381 FT FROM DER, 144 FT LEFT OF CENTERLINE, 92 FT AGL/385 FT MSL.
TREE 1.2 NM FROM DER, 878 FT RIGHT OF CENTERLINE, 99 FT AGL/465 FT MSL.

NOTE: RWY 15: TREE 67 FT FROM DER, 449 FT LEFT OF CENTERLINE, 38 FT AGL/251 FT MSL.
TREES BEGINNING 209 FT FROM DER, 74 FT LEFT OF CENTERLINE, UP TO 265 FT MSL.
TREES BEGINNING 517 FT FROM DER, 40 FT RIGHT OF CENTERLINE, UP TO 269 FT MSL.
TREES BEGINNING 558 FT FROM DER, 532 FT LEFT OF CENTERLINE, UP TO 282 FT MSL.
TREES BEGINNING 691 FT FROM DER, 420 FT LEFT OF CENTERLINE, UP TO 66 FT AGL/289 FT MSL.
TREES BEGINNING 791 FT FROM DER, 534 FT LEFT OF CENTERLINE, UP TO 309 FT MSL.
TREE 936 FT FROM DER, 612 FT RIGHT OF CENTERLINE, 280 FT MSL.
TREE 1034 FT FROM DER, 646 FT RIGHT OF CENTERLINE, 295 FT MSL.
TREES BEGINNING 1036 FT FROM DER, 384 FT RIGHT OF CENTERLINE, UP TO 312 FT MSL.
TREE 1231 FT FROM DER, 719 FT LEFT OF CENTERLINE, 317 FT MSL.
TREES BEGINNING 1285 FT FROM DER, 404 FT RIGHT OF CENTERLINE, UP TO 313 FT MSL.
TREES BEGINNING 1304 FT FROM DER, 438 FT LEFT OF CENTERLINE, UP TO 330 FT MSL.
TREES BEGINNING 1399 FT FROM DER, 555 FT RIGHT OF CENTERLINE, UP TO 321 FT MSL.
TREES BEGINNING 1414 FT FROM DER, 90 FT LEFT OF CENTERLINE, UP TO 334 FT MSL.
TREES BEGINNING 1458 FT FROM DER, 51 FT RIGHT OF CENTERLINE, UP TO 85 FT AGL/324 FT MSL.
TREES BEGINNING 1496 FT FROM DER, 9 FT LEFT OF CENTERLINE, UP TO 335 FT MSL.
TREES BEGINNING 1685 FT FROM DER, 9 FT RIGHT OF CENTERLINE, UP TO 326 FT MSL.
TREES BEGINNING 1691 FT FROM DER, 103 FT LEFT OF CENTERLINE, UP TO 345 FT MSL.
TREES BEGINNING 1915 FT FROM DER, 5 FT LEFT OF CENTERLINE, UP TO 354 FT MSL.
TREES BEGINNING 2541 FT FROM DER, 85 FT RIGHT OF CENTERLINE, UP TO 327 FT MSL.
TREES BEGINNING 3032 FT FROM DER, 697 FT RIGHT OF CENTERLINE, UP TO 329 FT MSL.
TREES BEGINNING 3255 FT FROM DER, 1123 FT LEFT OF CENTERLINE, UP TO 368 FT MSL.
TREE 3261 FT FROM DER, 1270 FT RIGHT OF CENTERLINE, 331 FT MSL.
TREE 3390 FT FROM DER, 1231 FT LEFT OF CENTERLINE, 370 FT MSL.
TREES BEGINNING 3394 FT FROM DER, 1011 FT LEFT OF CENTERLINE, UP TO 389 FT MSL.
TREE 3526 FT FROM DER, 1298 FT LEFT OF CENTERLINE, 402 FT MSL.
TREES BEGINNING 3538 FT FROM DER, 987 FT LEFT OF CENTERLINE, UP TO 408 FT MSL.
TREES BEGINNING 3652 FT FROM DER, 892 FT LEFT OF CENTERLINE, UP TO 410 FT MSL.
TREES BEGINNING 3715 FT FROM DER, 734 FT LEFT OF CENTERLINE, UP TO 413 FT MSL.
TREES BEGINNING 3787 FT FROM DER, 888 FT LEFT OF CENTERLINE, UP TO 416 FT MSL.
TREES BEGINNING 3932 FT FROM DER, 642 FT LEFT OF CENTERLINE, UP TO 418 FT MSL.
TREES BEGINNING 4020 FT FROM DER, 610 FT LEFT OF CENTERLINE, UP TO 424 FT MSL.



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TREES BEGINNING 4081 FT FROM DER, 581 FT LEFT OF CENTERLINE, UP TO 428 FT MSL.
TREES BEGINNING 4332 FT FROM DER, 684 FT LEFT OF CENTERLINE, UP TO 439 FT MSL.
TREES BEGINNING 4518 FT FROM DER, 647 FT LEFT OF CENTERLINE, UP TO 449 FT MSL.
TREES BEGINNING 4563 FT FROM DER, 529 FT LEFT OF CENTERLINE, UP TO 451 FT MSL.
TANK AND TREES BEGINNING 4666 FT FROM DER, 375 FT LEFT OF CENTERLINE, UP TO 457 FT MSL.
TREES BEGINNING 4784 FT FROM DER, 39 FT LEFT OF CENTERLINE, UP TO 465 FT MSL.
TREES BEGINNING 5440 FT FROM DER, 39 FT RIGHT OF CENTERLINE, UP TO 405 FT MSL.
TREE 5542 FT FROM DER, 117 FT RIGHT OF CENTERLINE, 407 FT MSL.
TREES BEGINNING 5561 FT FROM DER, 146 FT LEFT OF CENTERLINE, UP TO 466 FT MSL.
TREES BEGINNING 5581 FT FROM DER, 9 FT RIGHT OF CENTERLINE, UP TO 412 FT MSL.
TERRAIN AND TREES BEGINNING 5700 FT FROM DER, 263 FT LEFT OF CENTERLINE, UP TO 471 FT MSL.
TREES BEGINNING 5815 FT FROM DER, 151 FT LEFT OF CENTERLINE, UP TO 486 FT MSL.
TREES BEGINNING 5837 FT FROM DER, 18 FT LEFT OF CENTERLINE, UP TO 513 FT MSL.
TREES BEGINNING 5935 FT FROM DER, 71 FT LEFT OF CENTERLINE, UP TO 530 FT MSL.
TERRAIN AND TREES BEGINNING 1 NM FROM DER, 74 FT LEFT OF CENTERLINE, UP TO 559 FT MSL.
TERRAIN AND TREES BEGINNING 1 NM FROM DER, 12 FT LEFT OF CENTERLINE, UP TO 592 FT MSL.
TREES BEGINNING 1.3 NM FROM DER, 48 FT RIGHT OF CENTERLINE, UP TO 464 FT MSL.
TREE 1.3 NM FROM DER, 313 FT RIGHT OF CENTERLINE, 476 FT MSL.
TREES BEGINNING 1.3 NM FROM DER, 6 FT RIGHT OF CENTERLINE, UP TO 484 FT MSL.
TREES BEGINNING 1.3 NM FROM DER, 212 FT RIGHT OF CENTERLINE, UP TO 490 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 102 FT RIGHT OF CENTERLINE, UP TO 493 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 107 FT RIGHT OF CENTERLINE, UP TO 500 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 392 FT RIGHT OF CENTERLINE, UP TO 511 FT MSL.
VEHICLES ON ROAD AND TREES BEGINNING 1.4 NM FROM DER, 11 FT RIGHT OF CENTERLINE, UP TO 512 FT MSL.
VEHICLES ON ROAD AND TREES BEGINNING 1.4 NM FROM DER, 292 FT RIGHT OF CENTERLINE, UP TO 521 FT MSL.
VEHICLES ON ROAD AND TREES BEGINNING 1.4 NM FROM DER, 9 FT RIGHT OF CENTERLINE, UP TO 524 FT MSL.
TREES BEGINNING 1.5 NM FROM DER, 1005 FT RIGHT OF CENTERLINE, UP TO 59 FT AGL/525 FT MSL.

NOTE: RWY 20: TREES BEGINNING 541 FT FROM DER, 482 FT RIGHT OF CENTERLINE, UP TO 44 FT AGL/294 FT MSL.
TREE 1082 FT FROM DER, 734 FT LEFT OF CENTERLINE, 61 FT AGL/309 FT MSL.
TREES BEGINNING 1157 FT FROM DER, 170 FT LEFT OF CENTERLINE, UP TO 65 FT AGL/314 FT MSL.
TREES BEGINNING 1219 FT FROM DER, 385 FT RIGHT OF CENTERLINE, UP TO 70 FT AGL/311 FT MSL.
TREES BEGINNING 1325 FT FROM DER, 430 FT RIGHT OF CENTERLINE, UP TO 73 FT AGL/314 FT MSL.
TREES BEGINNING 1489 FT FROM DER, 106 FT RIGHT OF CENTERLINE, UP TO 72 FT AGL/317 FT MSL.
TREE 1594 FT FROM DER, 256 FT RIGHT OF CENTERLINE, 76 FT AGL/318 FT MSL.
TREE 1597 FT FROM DER, 486 FT RIGHT OF CENTERLINE, 80 FT AGL/320 FT MSL.
TREES BEGINNING 1622 FT FROM DER, 47 FT LEFT OF CENTERLINE, UP TO 75 FT AGL/321 FT MSL.
TREES BEGINNING 1676 FT FROM DER, 38 FT RIGHT OF CENTERLINE, UP TO 87 FT AGL/329 FT MSL.

NOTE: RWY 33: FENCE 82 FT FROM DER, 419 FT RIGHT OF CENTERLINE, 5 FT AGL/268 FT MSL.
TREE 105 FT FROM DER, 207 FT LEFT OF CENTERLINE, 267 FT MSL.
POLES AND BUILDINGS BEGINNING 645 FT FROM DER, 440 FT RIGHT OF CENTERLINE, UP TO 50 FT AGL/311 FT MSL.
TREE 863 FT FROM DER, 723 FT LEFT OF CENTERLINE, 329 FT MSL.
TREE 956 FT FROM DER, 377 FT LEFT OF CENTERLINE, 80 FT AGL/340 FT MSL.
TREES BEGINNING 958 FT FROM DER, 429 FT LEFT OF CENTERLINE, UP TO 360 FT MSL.
POLE AND TREES BEGINNING 1088 FT FROM DER, 434 FT LEFT OF CENTERLINE, UP TO 361 FT MSL.
POLE AND TREES BEGINNING 1566 FT FROM DER, 33 FT LEFT OF CENTERLINE, UP TO 362 FT MSL.
TREES BEGINNING 1652 FT FROM DER, 30 FT RIGHT OF CENTERLINE, UP TO 355 FT MSL.
TREES BEGINNING 1877 FT FROM DER, 93 FT RIGHT OF CENTERLINE, UP TO 358 FT MSL.
TREES BEGINNING 2091 FT FROM DER, 26 FT LEFT OF CENTERLINE, UP TO 367 FT MSL.
TREES BEGINNING 2263 FT FROM DER, 70 FT LEFT OF CENTERLINE, UP TO 375 FT MSL.
TREES BEGINNING 2400 FT FROM DER, 69 FT LEFT OF CENTERLINE, UP TO 379 FT MSL.
TREES BEGINNING 2604 FT FROM DER, 25 FT RIGHT OF CENTERLINE, UP TO 364 FT MSL.
TREES BEGINNING 2721 FT FROM DER, 13 FT LEFT OF CENTERLINE, UP TO 383 FT MSL.
TREES BEGINNING 2847 FT FROM DER, 107 FT LEFT OF CENTERLINE, UP TO 388 FT MSL.
BUILDINGS AND TREES BEGINNING 3011 FT FROM DER, 3 FT LEFT OF CENTERLINE, UP TO 392 FT MSL.
TREE 4175 FT FROM DER, 331 FT RIGHT OF CENTERLINE, 370 FT MSL.
TREE 4407 FT FROM DER, 168 FT RIGHT OF CENTERLINE, 375 FT MSL.
TREE 4503 FT FROM DER, 95 FT RIGHT OF CENTERLINE, 383 FT MSL.
TREES BEGINNING 1.3 NM FROM DER, 2512 FT RIGHT OF CENTERLINE, UP TO 488 FT MSL.
TREE 1.4 NM FROM DER, 2625 FT RIGHT OF CENTERLINE, 508 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 2530 FT RIGHT OF CENTERLINE, UP TO 84 FT AGL/513 FT MSL.
TOWERS BEGINNING 1.5 NM FROM DER, 2439 FT LEFT OF CENTERLINE, UP TO 307 FT AGL/545 FT MSL.

QUALITY
3
CHECKED

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CONTROLLING OBSTACLES:

RWY 2: 465 FT MSL TREE 421124.54N/0724216.76W.

RWY 15: 592 FT MSL TREE 420839.66N/0724122.09W (CLIMB GRADIENT, CLIMB-TO ALTITUDE, CEILING). 505 FT MSL TREE 420753.32N/0724124.67W (VISIBILITY).

RWY 33: 1079 FT MSL AAO 421148.20N/0724655.20W (CLIMB GRADIENT). 1539 FT MSL AAO 421334.00N/0724832.30W (CLIMB-TO ALTITUDE).

RWY 33 (VCOA): 1079 FT MSL TREE 421055.80N/0724719.70W (VCA). 1319 FT MSL AAO 421057.20N/0724729.80W (DIVERSE).

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT:

RWY 2: 1396 FT MSL TOWER 421430.52N/0723853.82W.

RWY 15, 20: 1170 FT MSL TOWER 420504.82N/0724213.29W.

RWY 33: 1339 FT MSL AAO 421118.60N/0724743.90W.



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REMARKS:

1. RWY 2 CLIMB GRADIENT ROUNDED TO 210 FT PER NM FOR PUBLICATION (COMPUTED VALUE 204.46 FT PER NM).
2. RWY 15 CLIMB GRADIENT ROUNDED TO 460 FT PER NM FOR PUBLICATION (COMPUTED VALUE 449.82 FT PER NM).
3. RWY 33 CLIMB GRADIENT ROUNDED TO 340 FT PER NM FOR PUBLICATION (COMPUTED VALUE 333.95 FT PER NM).
4. PRECIPITOUS TERRAIN EVALUATION COMPLETED IN VISUAL CLIMB AREA, NO ADJUSTMENTS REQUIRED.

FLIGHT INSPECTED BY:

BOB S PRESSLER

*Digitally signed by
JACOB POWERS
Jan 29, 2019*

OFFICE SYMBOL:

FICO

DATE:

1/10/19

DEVELOPED BY:

PETER GUIMOND

*Digitally signed by
PETER R GUIMOND
Nov 28, 2018*

OFFICE SYMBOL:

AJV-5442

DATE:

11/28/2018

APPROVED BY:

MARLON ROBINSON

*Digitally signed by
JACOB POWERS
Jan 29, 2019*

OFFICE SYMBOL:

AJV-5440

DATE:

REQUIRED EFFECTIVE DATE:

ROUTINE

COORDINATED WITH:

A4A	ALPA	AOPA	APA	HAI	NBAA
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

OTHER:

ZBW, BDL APP CON, BAF ATCT, AMGR.

CHANGES - REASONS:

1. AMENDED RWY 2 TAKEOFF MINIMUMS FROM 300-1 1/2 OR STANDARD WITH MINIMUM CLIMB OF 204 FT PER NM TO 600, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1200 FT PRIOR TO DEPARTURE END OF RUNWAY TO READ 200-1 1/2 OR STANDARD WITH MINIMUM CLIMB OF 210 FT PER NM TO 600, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1200 FT PRIOR TO DER - NEW OBSTACLE STUDY. FORMATTED IN ACCORDANCE WITH FAAO 8260.46F, APPENDIX D, PARA 6C.
2. AMENDED RWY 15 TAKEOFF MINIMUMS FROM 400-2 OR STANDARD WITH MINIMUM CLIMB OF 450 FT PER NM TO 800 TO READ 400-1 7/8 OR STANDARD WITH MINIMUM CLIMB OF 460 FT PER NM TO 800 - NEW OBSTACLE STUDY, CLIMB GRADIENT ROUNDED TO 460 FT PER NM FROM 450 FT PER NM TO PRECLUDE NOTAM ACTION SHOULD OBSTACLE HEIGHT OR DER ELEVATION CHANGE.
3. AMENDED RWY 33 TAKEOFF MINIMUMS FROM STANDARD WITH MINIMUM CLIMB OF 323 FT PER NM TO 2000 OR 1500-2 1/2 FOR CLIMB IN VISUAL CONDITIONS TO READ STANDARD WITH MINIMUM CLIMB OF 340 FT PER NM TO 1800 OR 1500-3 FOR VCOA - NEW OBSTACLE STUDY. MINIMUM VCOA VISIBILITY IS NOW 3 SM PER FAAO 8260.3D, PARA 14-4-4A.
4. AMENDED RWY 20 TEXTUAL DP FROM CLIMB HEADING 204.22 TO 1500 BEFORE PROCEEDING ON COURSE TO CLIMB HEADING 204.22 TO 1400 BEFORE PROCEEDING ON COURSE - NEW OBSTACLE STUDY.
5. AMENDED RWY 33 TEXTUAL DP FROM CLIMB HEADING 334.21 TO 1900 BEFORE PROCEEDING ON COURSE, OR FOR CLIMB IN VISUAL CONDITIONS: CROSS WESTFIELD-BARNES REGIONAL AIRPORT AT OR ABOVE 1600 MSL BEFORE PROCEEDING ON COURSE TO READ CLIMB HEADING 334.21 TO 1500 BEFORE PROCEEDING ON COURSE - NEW OBSTACLE STUDY. VCOA INSTRUCTIONS MOVED TO VISUAL CLIMB OVER AIRPORT BLOCK IN ACCORDANCE WITH FAAO 8260.46F, APPENDIX D, PARA 8.
6. AMENDED TAKEOFF OBSTACLE NOTES FOR ALL RUNWAYS - GROUPED AND FORMATTED IN ACCORDANCE WITH DEPARTURE OBSTACLES GROUPER SOP (1.0).
7. POPULATED OBSTACLES MANDATING ODP ROUTE DEVELOPMENT FOR ALL RUNWAYS - DOCUMENTED IN ACCORDANCE WITH FAAO 8260.46F, APPENDIX D, PARA 10C.

QUALITY
3
CHECKED