

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.

<u>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
DETROIT, MI	WILLOW RUN	24 MAY 2018	10B

TAKEOFF MINIMUMS:

RWY 05R, 05L, 09, 23R, 23L: STANDARD.

RWY 27: 300-1 1/2 OR STANDARD WITH A MINIMUM CLIMB OF 209 FEET PER NM TO 1000, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FEET PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1300 FEET PRIOR TO DEPARTURE END OF RUNWAY

TEXTUAL DEPARTURE PROCEDURES:

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:

NOTE: RWY 05R, ELECTRICAL SYSTEM BEGINNING 5 FT FROM DER, 56 FT RIGHT OF CENTERLINE, UP TO 3 FT AGL/703 FT MSL. ELECTRICAL SYSTEM 5 FT FROM DER, 56 FT LEFT OF CENTERLINE, 3 FT AGL/703 FT MSL. TRANSMISSION LINE 1070 FT FROM DER, 593 FT LEFT OF CENTERLINE, 34 FT AGL/731 FT MSL. TRANSMISSION LINE 1180 FT FROM DER, 492 FT LEFT OF CENTERLINE, 36 FT AGL/732 FT MSL. TREE 1406 FT FROM DER, 799 FT LEFT OF CENTERLINE, 42 FT AGL/741 FT MSL. TREE 1591 FT FROM DER, 902 FT LEFT OF CENTERLINE, 50 FT AGL/750 FT MSL. TREES BEGINNING 2193 FT FROM DER, 1037 FT RIGHT OF CENTERLINE, UP TO 69 FT AGL/762 FT MSL. TREE 2344 FT FROM DER, 1076 FT LEFT OF CENTERLINE, 68 FT AGL/769 FT MSL.

NOTE: RWY 05L, TRANSMISSION LINE BEGINNING 1390 FT FROM DER, 817 FT LEFT OF CENTERLINE, UP TO 39 FT AGL/744 FT MSL. TREE 1603 FT FROM DER, 802 FT LEFT OF CENTERLINE, 75 FT AGL/780 FT MSL. TREES BEGINNING 1668 FT FROM DER, 394 FT LEFT OF CENTERLINE, UP TO 80 FT AGL/786 FT MSL. TREES BEGINNING 2745 FT FROM DER, 1010 FT LEFT OF CENTERLINE, UP TO 89 FT AGL/791 FT MSL. TREE 3407 FT FROM DER, 967 FT LEFT OF CENTERLINE, 95 FT AGL/796 FT MSL.

NOTE: RWY 09, ELECTRICAL SYSTEM 10 FT FROM DER, 88 FT LEFT OF CENTERLINE, 2 FT AGL/700 FT MSL. BUILDING, NAVAID BEGINNING 150 FT FROM DER, 487 FT LEFT OF CENTERLINE, UP TO 18 FT AGL/715 FT MSL. TRAVERSE WAY BEGINNING 720 FT FROM DER, 641 FT RIGHT OF CENTERLINE, UP TO 35 FT AGL/736 FT MSL. TREE 1036 FT FROM DER, 550 FT LEFT OF CENTERLINE, 35 FT AGL/729 FT MSL. TREES BEGINNING 1113 FT FROM DER, 763 FT RIGHT OF CENTERLINE, UP TO 52 FT AGL/752 FT MSL. TREE 1347 FT FROM DER, 856 FT LEFT OF CENTERLINE, 59 FT AGL/754 FT MSL. TREES BEGINNING 1477 FT FROM DER, 791 FT LEFT OF CENTERLINE, UP TO 69 FT AGL/762 FT MSL. TREE 1692 FT FROM DER, 774 FT LEFT OF CENTERLINE, 77 FT AGL/773 FT MSL. STACK 1778 FT FROM DER, 892 FT RIGHT OF CENTERLINE, 70 FT AGL/770 FT MSL. TREE 1889 FT FROM DER, 775 FT LEFT OF CENTERLINE, 78 FT AGL/774 FT MSL. TREES BEGINNING 2104 FT FROM DER, 776 FT LEFT OF CENTERLINE, UP TO 81 FT AGL/776 FT MSL. TREES BEGINNING 2883 FT FROM DER, 787 FT LEFT OF CENTERLINE, UP TO 84 FT AGL/780 FT MSL. TREE 3773 FT FROM DER, 737 FT LEFT OF CENTERLINE, 100 FT AGL/796 FT MSL. TREE 3929 FT FROM DER, 516 FT LEFT OF CENTERLINE, 104 FT AGL/799 FT MSL.

NOTE: RWY 23L, ELECTRICAL SYSTEM 4 FT FROM DER, 69 FT LEFT OF CENTERLINE, 3 FT AGL/716 FT MSL. ELECTRICAL SYSTEM 5 FT FROM DER, 89 FT RIGHT OF CENTERLINE, 2 FT AGL/716 FT MSL. SIGN, TREE, POLE BEGINNING 21 FT FROM DER, 49 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/816 FT MSL. SIGN 33 FT FROM DER, 501 FT RIGHT OF CENTERLINE, 3 FT AGL/717 FT MSL. TREES, ELECTRICAL SYSTEM BEGINNING 141 FT FROM DER, 3 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/816 FT MSL. TREES BEGINNING 886 FT FROM DER, 39 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/819 FT MSL. TREES BEGINNING 1095 FT FROM DER, 4 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/819 FT MSL. TREE 1708 FT FROM DER, 879 FT RIGHT OF CENTERLINE, 100 FT AGL/822 FT MSL. TREES BEGINNING 1752 FT FROM DER, 127 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/826 FT MSL. TREES BEGINNING 1916 FT FROM DER, 61 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/829 FT MSL. TREES BEGINNING 2245 FT FROM DER, 17 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/832 FT MSL. TREES BEGINNING 2837 FT FROM DER, 70 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/822 FT MSL. TREES BEGINNING 3001 FT FROM DER, 291 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/832 FT MSL. TREES BEGINNING 3166 FT FROM DER, 48 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/835 FT MSL.

NOTE: RWY 23R, SIGN 61 FT FROM DER, 252 FT LEFT OF CENTERLINE, 3 FT AGL/717 FT MSL. TREES, POLE, BUILDING BEGINNING 82 FT FROM DER, 14 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/819 FT MSL. TREE 126 FT FROM DER, 140 FT LEFT OF CENTERLINE, 100 FT AGL/812 FT MSL. TREES BEGINNING 170 FT FROM DER, 51 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/816 FT MSL. TREES, BUILDING BEGINNING 783 FT FROM DER, 9 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/822 FT MSL. TREES BEGINNING 915 FT FROM DER, 29 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/819 FT MSL. TREES BEGINNING 1780 FT FROM DER, 250 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/826 FT MSL. TREES BEGINNING 1857 FT FROM DER, 58 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/829 FT MSL. TREES BEGINNING 1944 FT FROM DER, 7 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/829 FT MSL. TREES, STACK BEGINNING 2273 FT FROM DER, 14 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/832 FT MSL. TREES BEGINNING 3358 FT FROM DER, 51 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/835 FT MSL.

NOTE: RWY 27, FENCE BEGINNING 110 FT FROM DER, 353 FT RIGHT OF CENTERLINE, UP TO 6 FT AGL/722 FT MSL. TREE 118 FT FROM DER, 481 FT RIGHT OF CENTERLINE, 25 FT AGL/742 FT MSL. TREE, FENCE BEGINNING 181 FT FROM DER, 353 FT RIGHT OF CENTERLINE, UP TO 26 FT AGL/745 FT MSL. TREE, FENCE BEGINNING 200 FT FROM DER, 353 FT RIGHT OF CENTERLINE, UP TO 52 FT AGL/769 FT MSL. TERRAIN, FENCE BEGINNING 468 FT FROM DER, 93 FT LEFT OF CENTERLINE, UP TO 729 FT MSL. TREE, POLE BEGINNING 503 FT FROM DER, 212 FT RIGHT OF CENTERLINE, UP TO 51 FT AGL/771 FT MSL. POLE 768 FT FROM DER, 102 FT LEFT OF CENTERLINE, 26 FT AGL/742 FT MSL. POLE 841 FT FROM DER, 174 FT LEFT OF CENTERLINE, 27 FT AGL/744 FT MSL. POLE BEGINNING 985 FT FROM DER, 42 FT LEFT OF CENTERLINE, UP TO 35 FT AGL/752 FT MSL. POLE 1222 FT FROM DER, 423 FT LEFT OF CENTERLINE, 43 FT AGL/760 FT MSL. POLE 1243 FT FROM DER, 38 FT LEFT OF CENTERLINE, 44 FT AGL/761 FT MSL. POLE, BUILDING BEGINNING 1559 FT FROM DER, 43 FT LEFT OF CENTERLINE, UP TO 54 FT AGL/772 FT MSL. BUILDING 1786 FT FROM DER, 865 FT LEFT OF CENTERLINE, 55 FT AGL/773 FT MSL. BUILDING BEGINNING 1816 FT FROM DER, 789 FT LEFT OF CENTERLINE, UP TO 58 FT AGL/777 FT MSL. BUILDING, POLE BEGINNING 1843 FT FROM DER, 45 FT LEFT OF CENTERLINE, UP TO 59 FT AGL/778 FT MSL. TREE 2836 FT FROM DER, 833 FT RIGHT OF CENTERLINE, 68 FT AGL/789 FT MSL. TREE 2869 FT FROM DER, 985 FT RIGHT OF CENTERLINE, 75 FT AGL/794 FT MSL. TREES BEGINNING 2910 FT FROM DER, 1007 FT RIGHT OF CENTERLINE, UP TO 76 FT AGL/795 FT MSL. BUILDING 2931 FT FROM DER, 784 FT LEFT OF CENTERLINE, 68 FT AGL/789 FT MSL. TRANSMISSION LINE 3710 FT FROM DER, 390 FT RIGHT OF CENTERLINE, 90 FT AGL/812 FT MSL. TRANSMISSION LINE, CATENARY BEGINNING 3961 FT FROM DER, 775 FT LEFT OF CENTERLINE, UP TO 101 FT AGL/825 FT MSL. TREE 4002 FT

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FROM DER, 1392 FT RIGHT OF CENTERLINE, 85 FT AGL/817 FT MSL. TRANSMISSION LINE 4076 FT FROM DER, 119 FT LEFT OF CENTERLINE, 104 FT AGL/830 FT MSL. TREE 4482 FT FROM DER, 471 FT RIGHT OF CENTERLINE, 104 FT AGL/834 FT MSL. TOWER 1.1 NM FROM DER, 468 FT LEFT OF CENTERLINE, 165 FT AGL/903 FT MSL.

CONTROLLING OBSTACLES:

RWY 27, 903 FT MSL TOWER 421431.78N-0833411.47W

REMARKS:

FLIGHT INSPECTED BY:	<i>Digitally signed by</i> ROBERT G HAMILTON	OFFICE SYMBOL:	DATE:
RUSSELL P ELLIOTT	Mar 20, 2018	FICO	3/13/18

DEVELOPED BY:	<i>Digitally signed by</i> JIMMY S HUGHES	OFFICE SYMBOL:	DATE:
JIMMY SANG HUGHES	Nov 29, 2017	AJV-5422	11/17/2017

APPROVED BY:	<i>Digitally signed by</i> ROBERT G HAMILTON	OFFICE SYMBOL:	DATE:
JULIE MORGAN	Mar 20, 2018	AJV-5420	

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:

DTW ATCT, YIP ATCT, ZOB, AMGR

CHANGES - REASONS:

1. UPDATED TAKE OFF OBSTACLE NOTES.
2. INCREASED RWY 27 CG FROM 206 TO 209, SAME CONTROLLING OBSTACLE, NEW AIRPORT SURVEY CHANGED TOWER HEIGHT FROM 900 MSL TO 903 MSL.

