

**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
BOYNE CITY, MI	BOYNE CITY MUNI	20 JUNE 2019	1

TAKEOFF MINIMUMS:

RWY 9: 600 - 2 3/4 OR STANDARD WITH MINIMUM CLIMB OF 503 FT PER NM TO 1300.
RWY 27: STANDARD WITH MINIMUM CLIMB OF 238 FT PER NM TO 1800 OR 1200 - 2 1/2 FOR VCOA.

TEXTUAL DEPARTURE PROCEDURES:

RWY 9: CLIMB HEADING 097.64 TO 1200 BEFORE PROCEEDING ON COURSE.
RWY 27: CLIMB HEADING 277.65 TO 1900 BEFORE TURNING LEFT.

VISUAL CLIMB OVER AIRPORT:

RWY 27: OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS BOYNE CITY MUNI AT OR ABOVE 1700 BEFORE PROCEEDING ON COURSE.

TAKEOFF OBSTACLE NOTES:

NOTE: RWY 09: TREE 10 FT FROM DER, 180 FT RIGHT OF CENTERLINE, 681 FT MSL.
NAVAID 13 FT FROM DER, 112 FT LEFT OF CENTERLINE, 8 FT AGL/661 FT MSL.
TREE 38 FT FROM DER, 300 FT LEFT OF CENTERLINE, 700 FT MSL.
TREE, VEHICLES ON ROAD BEGINNING 98 FT FROM DER, 246 FT RIGHT OF CENTERLINE, UP TO 704 FT MSL.
TREE 125 FT FROM DER, 486 FT LEFT OF CENTERLINE, 722 FT MSL.
TREE, POLE, TRANSMISSION LINE BEGINNING 143 FT FROM DER, 18 FT LEFT OF CENTERLINE, UP TO 739 FT MSL.
TREE, SIGN, VEHICLES ON ROAD BEGINNING 175 FT FROM DER, 145 FT RIGHT OF CENTERLINE, UP TO 709 FT MSL.
TREE, VEHICLES ON ROAD, TRANSMISSION LINE, POLE BEGINNING 431 FT FROM DER, 176 FT RIGHT OF CENTERLINE, UP TO 731 FT MSL.
TREES BEGINNING 893 FT FROM DER, 22 FT RIGHT OF CENTERLINE, UP TO 732 FT MSL.
TREES BEGINNING 2479 FT FROM DER, 55 FT LEFT OF CENTERLINE, UP TO 740 FT MSL.
TREE 2594 FT FROM DER, 296 FT RIGHT OF CENTERLINE, 733 FT MSL.
TREE 2602 FT FROM DER, 124 FT RIGHT OF CENTERLINE, 745 FT MSL.
TREES BEGINNING 2612 FT FROM DER, 82 FT RIGHT OF CENTERLINE, UP TO 755 FT MSL.
TREE 2618 FT FROM DER, 83 FT LEFT OF CENTERLINE, 751 FT MSL.
TREES BEGINNING 2621 FT FROM DER, 32 FT LEFT OF CENTERLINE, UP TO 755 FT MSL.
TREE 2654 FT FROM DER, 187 FT LEFT OF CENTERLINE, 759 FT MSL.
TREES BEGINNING 2654 FT FROM DER, 58 FT RIGHT OF CENTERLINE, UP TO 762 FT MSL.
TREES BEGINNING 2655 FT FROM DER, 128 FT LEFT OF CENTERLINE, UP TO 760 FT MSL.
TREES BEGINNING 2681 FT FROM DER, 53 FT LEFT OF CENTERLINE, UP TO 761 FT MSL.
TREES BEGINNING 2682 FT FROM DER, 35 FT RIGHT OF CENTERLINE, UP TO 763 FT MSL.
TREES BEGINNING 2709 FT FROM DER, 158 FT LEFT OF CENTERLINE, UP TO 766 FT MSL.
TREES BEGINNING 2753 FT FROM DER, 4 FT LEFT OF CENTERLINE, UP TO 768 FT MSL.
TREES BEGINNING 2820 FT FROM DER, 2 FT LEFT OF CENTERLINE, UP TO 773 FT MSL.
TREES BEGINNING 3881 FT FROM DER, 1083 FT LEFT OF CENTERLINE, UP TO 823 FT MSL.
TREES BEGINNING 3974 FT FROM DER, 473 FT LEFT OF CENTERLINE, UP TO 846 FT MSL.
TREES BEGINNING 4075 FT FROM DER, 322 FT LEFT OF CENTERLINE, UP TO 861 FT MSL.
TREE 4481 FT FROM DER, 849 FT LEFT OF CENTERLINE, 868 FT MSL.
TREES BEGINNING 4502 FT FROM DER, 459 FT LEFT OF CENTERLINE, UP TO 869 FT MSL.
TREES BEGINNING 4641 FT FROM DER, 443 FT LEFT OF CENTERLINE, UP TO 879 FT MSL.
TREES BEGINNING 4727 FT FROM DER, 467 FT LEFT OF CENTERLINE, UP TO 886 FT MSL.
TREES BEGINNING 4834 FT FROM DER, 691 FT LEFT OF CENTERLINE, UP TO 887 FT MSL.
TREES BEGINNING 4854 FT FROM DER, 395 FT LEFT OF CENTERLINE, UP TO 892 FT MSL.
TREES BEGINNING 4935 FT FROM DER, 286 FT LEFT OF CENTERLINE, UP TO 909 FT MSL.
TREES BEGINNING 5063 FT FROM DER, 266 FT LEFT OF CENTERLINE, UP TO 923 FT MSL.
TREES BEGINNING 5086 FT FROM DER, 299 FT LEFT OF CENTERLINE, UP TO 936 FT MSL.
TREES BEGINNING 5157 FT FROM DER, 286 FT LEFT OF CENTERLINE, UP TO 939 FT MSL.
TREE 5189 FT FROM DER, 1178 FT LEFT OF CENTERLINE, 940 FT MSL.
TREES BEGINNING 5197 FT FROM DER, 271 FT LEFT OF CENTERLINE, UP TO 962 FT MSL.
TREES BEGINNING 5292 FT FROM DER, 213 FT LEFT OF CENTERLINE, UP TO 988 FT MSL.
TREE, TERRAIN BEGINNING 5371 FT FROM DER, ON CENTERLINE, UP TO 997 FT MSL.

QUALITY
3
CHECKED

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TREE 5605 FT FROM DER, 1019 FT RIGHT OF CENTERLINE, 805 FT MSL.
TREES BEGINNING 5812 FT FROM DER, 11 FT RIGHT OF CENTERLINE, UP TO 814 FT MSL.
TREES BEGINNING 5912 FT FROM DER, 227 FT RIGHT OF CENTERLINE, UP TO 823 FT MSL.
TREES BEGINNING 5933 FT FROM DER, 307 FT RIGHT OF CENTERLINE, UP TO 831 FT MSL.
TREES BEGINNING 5972 FT FROM DER, 14 FT RIGHT OF CENTERLINE, UP TO 838 FT MSL.
TREE, TERRAIN BEGINNING 6023 FT FROM DER, 14 FT LEFT OF CENTERLINE, UP TO 1027 FT MSL.
TREES BEGINNING 6066 FT FROM DER, 2 FT RIGHT OF CENTERLINE, UP TO 858 FT MSL.
TREE, TERRAIN BEGINNING 1 NM FROM DER, 9 FT LEFT OF CENTERLINE, UP TO 1036 FT MSL.
TREES BEGINNING 1 NM FROM DER, 133 FT RIGHT OF CENTERLINE, UP TO 873 FT MSL.
TREES BEGINNING 1.1 NM FROM DER, 151 FT RIGHT OF CENTERLINE, UP TO 894 FT MSL.
TREES BEGINNING 1.1 NM FROM DER, 360 FT RIGHT OF CENTERLINE, UP TO 898 FT MSL.
TREES BEGINNING 1.1 NM FROM DER, 1802 FT LEFT OF CENTERLINE, UP TO 1050 FT MSL.
TREE 1.1 NM FROM DER, 540 FT RIGHT OF CENTERLINE, 912 FT MSL.
TREES BEGINNING 1.1 NM FROM DER, 336 FT RIGHT OF CENTERLINE, UP TO 931 FT MSL.
TREE, TERRAIN BEGINNING 1.1 NM FROM DER, 224 FT LEFT OF CENTERLINE, UP TO 1061 FT MSL.
TREES BEGINNING 1.1 NM FROM DER, 139 FT RIGHT OF CENTERLINE, UP TO 954 FT MSL.
TREE, TERRAIN BEGINNING 1.1 NM FROM DER, 495 FT LEFT OF CENTERLINE, UP TO 1074 FT MSL.
TREE, TERRAIN BEGINNING 1.2 NM FROM DER, 197 FT LEFT OF CENTERLINE, UP TO 1087 FT MSL.
TREE 1.2 NM FROM DER, 339 FT RIGHT OF CENTERLINE, 972 FT MSL.
TREE, POLE, TRANSMISSION LINE, CATENARY BEGINNING 1.2 NM FROM DER, 4 FT RIGHT OF CENTERLINE, UP TO 1007 FT MSL.
TREE, TERRAIN, TRANSMISSION LINE, POLE BEGINNING 1.2 NM FROM DER, 19 FT LEFT OF CENTERLINE, UP TO 1127 FT MSL.
TREES BEGINNING 1.3 NM FROM DER, 320 FT RIGHT OF CENTERLINE, UP TO 1011 FT MSL.
TREES BEGINNING 1.3 NM FROM DER, 174 FT RIGHT OF CENTERLINE, UP TO 1027 FT MSL.
TREES BEGINNING 1.3 NM FROM DER, 117 FT RIGHT OF CENTERLINE, UP TO 1036 FT MSL.
TREES BEGINNING 1.3 NM FROM DER, 280 FT LEFT OF CENTERLINE, UP TO 1130 FT MSL.
TREES BEGINNING 1.3 NM FROM DER, 12 FT LEFT OF CENTERLINE, UP TO 1141 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 301 FT RIGHT OF CENTERLINE, UP TO 1040 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 361 FT LEFT OF CENTERLINE, UP TO 1146 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 63 FT RIGHT OF CENTERLINE, UP TO 1051 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 119 FT LEFT OF CENTERLINE, UP TO 1147 FT MSL.
TREE 1.4 NM FROM DER, 289 FT RIGHT OF CENTERLINE, 1055 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 30 FT LEFT OF CENTERLINE, UP TO 1149 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 2 FT RIGHT OF CENTERLINE, UP TO 1080 FT MSL.
TREES BEGINNING 1.4 NM FROM DER, 70 FT RIGHT OF CENTERLINE, UP TO 1101 FT MSL.
TREES BEGINNING 1.5 NM FROM DER, 786 FT LEFT OF CENTERLINE, UP TO 1151 FT MSL.
TREE, TERRAIN BEGINNING 1.5 NM FROM DER, 47 FT LEFT OF CENTERLINE, UP TO 1157 FT MSL.
TREES BEGINNING 1.5 NM FROM DER, 700 FT LEFT OF CENTERLINE, UP TO 1161 FT MSL.
TREE, TERRAIN BEGINNING 1.5 NM FROM DER, 13 FT LEFT OF CENTERLINE, UP TO 1167 FT MSL.
TREES BEGINNING 1.5 NM FROM DER, 52 FT RIGHT OF CENTERLINE, UP TO 1132 FT MSL.
TREES BEGINNING 1.5 NM FROM DER, 8 FT RIGHT OF CENTERLINE, UP TO 1142 FT MSL.
TREE 2.2 NM FROM DER, 2497 FT RIGHT OF CENTERLINE, 1025 FT MSL.

NOTE: RWY 27: BUILDING 30 FT FROM DER, 437 FT RIGHT OF CENTERLINE, 27 FT AGL/678 FT MSL.
TREE 30 FT FROM DER, 311 FT RIGHT OF CENTERLINE, 703 FT MSL.
TREE, BUILDING, POLE, TRANSMISSION LINE BEGINNING 45 FT FROM DER, 1 FT RIGHT OF CENTERLINE, UP TO 725 FT MSL.
VEHICLES ON ROAD 64 FT FROM DER, 203 FT LEFT OF CENTERLINE, 672 FT MSL.
POLE 113 FT FROM DER, 515 FT LEFT OF CENTERLINE, 31 FT AGL/690 FT MSL.
BUILDING, POLE, FENCE BEGINNING 118 FT FROM DER, 67 FT LEFT OF CENTERLINE, UP TO 37 FT AGL/694 FT MSL.
TREE, POLE, BUILDING, TRANSMISSION LINE BEGINNING 244 FT FROM DER, 13 FT LEFT OF CENTERLINE, UP TO 728 FT MSL.
TREE, POLE, TRANSMISSION LINE, BUILDING BEGINNING 435 FT FROM DER, 19 FT RIGHT OF CENTERLINE, UP TO 726 FT MSL.
TREES BEGINNING 649 FT FROM DER, 24 FT RIGHT OF CENTERLINE, UP TO 739 FT MSL.
TREE, BUILDING, POLE, TRANSMISSION LINE BEGINNING 719 FT FROM DER, 1 FT RIGHT OF CENTERLINE, UP TO 743 FT MSL.



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TREE, POLE, TRANSMISSION LINE BEGINNING 1056 FT FROM DER, 7 FT LEFT OF CENTERLINE, UP TO 734 FT MSL.
TREES BEGINNING 2774 FT FROM DER, 58 FT LEFT OF CENTERLINE, UP TO 743 FT MSL.

CONTROLLING OBSTACLES:

RWY 9: 997 FEET MSL TREE 451238.78N/0845740.04W (CLIMB GRADIENT), 1127 FEET MSL TREE 451248.52N/0845709.89W (CLIMB GRADIENT TERMINATION ALTITUDE), 1167 FEET MSL TREE 451231.95N/0845645.05W (CEILING), 1025 FEET MSL TREE 451159.98N/0845548.90W (VISIBILITY).

RWY 27: 1450 FEET MSL TOWER 451131.86N/0850610.58W.

RWY 27 (VCOA): 1167 FEET MSL TREE 451231.95N/0845645.05W (VCA), 1676 FEET MSL TOWER 451049.00N/0850550.20W (VCOA DIVERSE).

OBSTACLE MANDATING ODP ROUTE DEVELOPMENT: RWY 27: 1676 FEET MSL TOWER 451049.00N/0850550.20W.

REMARKS:

LETTER OF APPROVAL ON FILE AUTHORIZING A CG IN EXCESS OF 500 FEET PER NM FOR RWY 9.

<u>FLIGHT INSPECTED BY:</u>	<i>Digitally signed by</i>	<u>OFFICE SYMBOL:</u>	<u>DATE:</u>
PAUL R ARMSTRONG	ROBERT G HAMILTON	FICO	08/10/2018
	Aug 15, 2018		

<u>DEVELOPED BY:</u>	<i>Digitally signed by</i>	<u>OFFICE SYMBOL:</u>	<u>DATE:</u>
RUSS ROSLEWSKI	RUSSELL ROSLEWSKI	AJV-5421	06/27/2018
	Jul 09, 2018		

<u>APPROVED BY:</u>	<i>Digitally signed by</i>	<u>OFFICE SYMBOL:</u>	<u>DATE:</u>
JULIE MORGAN	ROBERT G HAMILTON	AJV-5420	
	Aug 15, 2018		

REQUIRED EFFECTIVE DATE:
ROUTINE

COORDINATED WITH:

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

OTHER:

ZMP, AIRPORT MANAGER

CHANGES - REASONS:

1. TAKEOFF MINIMUMS RWY 9 CHANGED FROM 600-3 TO 600-2 3/4, 207 FT PER NM CLIMB GRADIENT REMOVED, REDUCED TAKEOFF LENGTH OPTION REMOVED, CLIMB GRADIENT WITH STANDARD MINIMUMS CHANGED FROM 500 FT PER NM TO 1400, TO 503 FT PER NM TO 1300 - RECALCULATION WITH NEW CONTROLLING OBSTACLES.
2. TAKEOFF MINIMUMS RWY 27 REMOVED CEILING/VIS OPTION, INCREASED CG FROM 230 TO 238, ADDED VCOA OPTION - RECALCULATION USING CURRENT CRITERIA AND NEW CONTROLLING OBSTACLES.
3. TEXTUAL DEPARTURE PROCEDURE RWY 9 ADDED - ALLOWS CEILING/VIS OPTION WITH STANDARD CLIMB GRADIENT BY ELIMINATING OBSTACLES TO THE LEFT OF THE EXTENDED ICA.
4. TAKEOFF OBSTACLE NOTES UPDATED - CURRENT CRITERIA ON GROUPING OF OBSTACLES.

QUALITY
3
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