

U.S. DEPARTMENT OF TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION  
**TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)**

Bearings, headings, courses, tracks and radials are magnetic. Elevation 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.
BOYNE FALLS, MI	BOYNE MOUNTAIN	29 MAY 2014	4

**TAKEOFF MINIMUMS:**

**RWY 17:** STANDARD WITH MINIMUM CLIMB OF 490 FT PER NM TO 1400 OR 1300-2 1/2 FOR CLIMB IN VISUAL CONDITIONS.

**RWY 35:** STANDARD WITH MINIMUM CLIMB OF 310 FT PER NM TO 1400 OR 1300-2 1/2 FOR CLIMB IN VISUAL CONDITIONS.

**TEXTUAL DEPARTURE PROCEDURES:**

**RWY 17:** CLIMB HEADING 175.27 TO 1400 BEFORE PROCEEDING ON COURSE, OR FOR CLIMB IN VISUAL CONDITIONS CROSS BOYNE MOUNTAIN AIRPORT AT OR ABOVE 1900 BEFORE PROCEEDING ON COURSE. WHEN EXECUTING VCOA, NOTIFY ATC PRIOR TO DEPARTURE.

**RWY 35:** CLIMB HEADING 355.27 TO 1400 BEFORE PROCEEDING ON COURSE, OR FOR CLIMB IN VISUAL CONDITIONS CROSS BOYNE MOUNTAIN AIRPORT AT OR ABOVE 1900 BEFORE PROCEEDING ON COURSE. WHEN EXECUTING VCOA, NOTIFY ATC PRIOR TO DEPARTURE.

**TAKEOFF OBSTACLE NOTES:**

**NOTE: RWY 17,** VEHICLES ON ROAD BEGINNING 10 FT FROM DER, 93 FT RIGHT OF CENTERLINE, UP TO 15 FT AGL/753 FT MSL. TREES BEGINNING 13 FT FROM DER, 170 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/854 FT MSL. VEHICLES ON ROAD BEGINNING 402 FT FROM DER, 16 FT LEFT OF CENTERLINE, UP TO 15 FT AGL/736 FT MSL. TREES BEGINNING 529 FT FROM DER, 143 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/838 FT MSL. TREES BEGINNING 2915 FT FROM DER, 1028 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/903 FT MSL. TREES BEGINNING 2.4 NM FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 100 FT AGL/1231 FT MSL.

**NOTE: RWY 35,** VEHICLES ON ROAD BEGINNING 28 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 15 FT AGL/720 FT MSL. TREES BEGINNING 613 FT FROM DER, 599 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/805 FT MSL. TREES BEGINNING 1355 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 100 FT AGL/805 FT MSL. TREES BEGINNING 2319 FT FROM DER, 465 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/797 FT MSL. MULTIPLE TREES BEGINNING 1.6 NM FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 100 FT AGL/1069 FT MSL. TREES BEGINNING 1.7 NM FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 100 FT AGL/1091 FT MSL. TREES BEGINNING 1.8 NM FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 100 FT AGL/1124 FT MSL. MULTIPLE TREES BEGINNING 1.9 NM FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 100 FT AGL/1127 FT MSL. MULTIPLE TREES BEGINNING 2.1 NM FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 100 FT AGL/1161 FT MSL.

**CONTROLLING OBSTACLES:**

**RWY 17:** 903 FT MSL TREE, 450900.80N-0845527.80W; 1528 FT MSL AAO, 450601.00N-0845508.10W.

**RWY 35:** 1124 FT MSL TREE, 451208.85N-0845604.45W; 1161 FT MSL TREE, 451231.37N-0845624.91W.

**RWY 17, 35 (VCOA):** 2041 FT MSL TOWER, 451020.00N-0844507.00W. 1395 FT MSL TREE 450833.00N-0845141.50W.

**OBSTACLES MANDATING ODP ROUTE DEVELOPMENT:** RWY 17 – 1264 FT MSL TREE, 450937.00N-0845616.00W. RWY 35 – 1264 FT MSL TREE, 450937.00N-0845616.00W.

QUALITY  
1  
CHECKED

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**REMARKS:**

**FLIGHT INSPECTED BY:**

James ONeal *[Signature]* 3/11/14

**REQUIRED EFFECTIVE DATE:**

ROUTINE

**DEVELOPED BY:**

STEPHEN PETERSON *[Signature]* AJV-353

12/04/2013

**APPROVED BY:**

GEORGE GONZALEZ *[Signature]* AJV-353

4.9.14

**COORDINATED WITH:**

ALPA, AOPA, NBAA, ZMP, AMGR

**CHANGES:**

1. ADDED VCOA AND APPLICABLE NOTES TO PROCEDURE.
2. CHANGED RWY 17 MINIMUMS FROM "1000-1" TO "STANDARD WITH MINIMUM CLIMB OF 490 FT PER NM TO 1400 OR 1300-2 1/2 FOR CLIMB IN VISUAL CONDITIONS."
3. CHANGED RWY 35 MINIMUMS FROM "500-1" TO "STANDARD WITH MINIMUM CLIMB OF 310 FT PER NM TO 1400 OR 1300-2 1/2 FOR CLIMB IN VISUAL CONDITIONS."
4. CHANGE RWY 17, 35 ROUTE FROM "CLIMB RWY HEADING TO 2000 BEFORE TURNING" TO "RWY 17: CLIMB HEADING 175.27 TO 1400 BEFORE PROCEEDING ON COURSE, OR FOR CLIMB IN VISUAL CONDITIONS CROSS BOYNE MOUNTAIN AIRPORT AT OR ABOVE 1900 BEFORE PROCEEDING ON COURSE. WHEN EXECUTING VCOA, NOTIFY ATC PRIOR TO DEPARTURE.  
RWY 35: CLIMB HEADING 355.27 TO 1400 BEFORE PROCEEDING ON COURSE, OR FOR CLIMB IN VISUAL CONDITIONS CROSS BOYNE MOUNTAIN AIRPORT AT OR ABOVE 1900 BEFORE PROCEEDING ON COURSE. WHEN EXECUTING VCOA, NOTIFY ATC PRIOR TO DEPARTURE."
5. ADDED TAKEOFF OBSTACLES NOTES.

**REASONS:**

1. OBSTACLES PENETRATING THE 40:1 SURFACE BEYOND 3SM PRECLUDED ROUTE DEPARTURE TO AVOID.
- 2-4. NEW CONTROLLING OBSTACLES.
5. NEW OBSTACLE EVALUATION.

