

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

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City, State	Airport	Effective Date	Amdt. No.
DENVER, CO	CENTENNIAL	11/15/2012	5

TAKEOFF MINIMUMS:

RWY 10, 28, 35L, 35R: STANDARD.
RWY 17R: STANDARD WITH MINIMUM CLIMB OF 370 FT PER NM TO 6800.
RWY 17L: STANDARD WITH MINIMUM CLIMB OF 255 FT PER NM TO 6800.

TEXTUAL DEPARTURE PROCEDURES:

RWY 10: WHEN DEPARTING ON COURSES BETWEEN 162 CCW TO 333 FROM DEPARTURE END OF RUNWAY CLIMB HEADING 102.95 TO 6600 BEFORE TURNING RIGHT. ALL OTHER COURSES: CLIMBING LEFT TURN TO INTERCEPT DEN VOR/DME R-194 TO DEN VOR/DME, THENCE...

RWY 17L/R: CLIMB ON HEADING BETWEEN 350 CW TO 162 FROM DEPARTURE END OF RUNWAY. ALL OTHER COURSES: CLIMBING LEFT TURN TO INTERCEPT DEN VOR/DME R-199 TO DEN VOR/DME, THENCE...

RWY 28: CLIMB ON HEADING BETWEEN 333 CW TO 103 FROM DEPARTURE END OF RUNWAY. ALL OTHER COURSES: CLIMBING RIGHT TURN TO INTERCEPT DEN VOR/DME R-210 TO DEN VOR/DME, THENCE...

RWY 35L/R: CLIMB ON A HEADING BETWEEN 333 CW 162 FROM DEPARTURE END OF RUNWAY. ALL OTHER COURSES: CLIMB HEADING 349.95 TO INTERCEPT DEN VOR/DME R-211 TO DEN VOR/DME, THENCE...

...CLIMB IN DEN VOR/DME HOLDING PATTERN (HOLD S, RIGHT TURNS, 343.00 INBOUND) TO 16500 BEFORE PROCEEDING ON COURSE.

TAKEOFF OBSTACLE NOTES:

NOTE: RWY 10: TERRAIN BEGINNING 369 FT FROM DER 30 FT RIGHT OF CENTERLINE, UP TO 5854 FT MSL. FENCES BEGINNING 1211 FT FROM DER, 233 FT RIGHT OF CENTERLINE, UP TO 8 FT AGL/5841 FT MSL. MULTIPLE BUSHES BEGINNING 1378 FT FROM DER, 284 FT RIGHT OF CENTERLINE, UP TO 6 FT AGL/5840 FT MSL. MULTIPLE ROADS WITH VEHICLES BEGINNING 198 FT FROM DER, 404 FT LEFT OF CENTERLINE, UP TO 15 FT AGL/5835 FT MSL. TERRAIN 1358 FT FROM DER, 253 FT LEFT OF CENTERLINE, UP TO 5830 FT MSL.

NOTE: RWY 17L: MULTIPLE TREES BEGINNING 2968 FT FROM DER, 761 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/5976 FT MSL.

NOTE: RWY 17R: TERRAIN 181 FT FROM DER 496 FT RIGHT OF CENTERLINE, 5887 FT MSL. FENCE 538 FT FROM DER, 196 FT RIGHT OF CENTERLINE, 8 FT AGL/5886 FT MSL. MULTIPLE TREES BEGINNING 562 FT FROM DER, 61 FT RIGHT OF CENTERLINE, UP TO 16 FT AGL/5976 FT MSL. MULTIPLE LIGHT POLES BEGINNING 2362 FT FROM DER, 256 FT RIGHT OF CENTERLINE, UP TO 30 FT AGL/5942 FT MSL. OBSTRUCTION LIGHT ON BUILDING 3282 FT FROM DER, 842 FT RIGHT OF CENTERLINE, 90 FT AGL/6021 FT MSL.

NOTE: RWY 28: TERRAIN BEGINNING 89 FT FROM DER, ON CENTERLINE EXTENDING TO 514 FT LEFT TO 137 FT RIGHT OF CENTERLINE, UP TO 5843 FT MSL. WINDSOCK 100 FT FROM DER, 183 FT LEFT OF CENTERLINE, 15 FT AGL/5832 FT MSL. MULTIPLE TREES BEGINNING 1640 FT FROM DER, 731 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/ 5959 FT MSL.

CONTROLLING OBSTACLES:

NOTE: RWY 17L: 6559 FT MSL AAO 392953.93N/1045044.26.
NOTE: RWY 17R: 6021 FT MSL OBS LT ON BLDG 393302.52N/1045119.43W, 6559 FT MSL AAO 392953.93N/1045044.26.

OBSTACLES MANDATING ROUTE DEVELOPMENT:

RWY 10 – 6520 FT MSL TOWER 393024.00N/1044604.00W, 13591 FT MSL AAO 395019.70N/1054255.40W, 14470 FT MSL AAO 393807.40N/1054902.40W, 12995 FT MSL AAO 384926.53N/1050138.90W.
RWY 17L/R - 13591 FT MSL AAO 395019.70N/1054255.40W, 14470 FT MSL AAO 393807.40N/1054902.40W, 12995 FT MSL AAO 384926.53N/1050138.90W.
RWY 28 - 13591 FT MSL AAO 395019.70N/1054255.40W, 14470 FT MSL AAO 393807.40N/1054902.40W, 14310 FT MSL AAO 385020.60N/1050238.00W.
RWY 35L/R - 13591 FT MSL AAO 395019.70N/1054255.40W, 14470 FT MSL AAO 393807.40N/1054902.40W, 14310 FT MSL AAO 385020.60N/1050238.00W.

REMARKS:

CLIMB IN HOLD TO 16500 PRIOR TO WESTBOUND (ALL OTHER COURSES) PER FLIGHT CHECK RECOMMENDATION DUE TO MOUNTAIN WAVE TURBULENCE AS INDICATED ON FLIGHT INSPECTION REPORT.

SPOT ELEVATION 14225 AT 401511.20N-1053651.40W LOCATED BEYOND 46 NM WAS TAKEN INTO CONSIDERATION WHEN DETERMINING THE 330 HEADING IN THE DEPARTURE PROCEDURE INSTRUCTIONS.

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DENVER, CO	CENTENNIAL	11/15/2012	5

FLIGHT INSPECTED BY:

REQUIRED EFFECTIVE DATE:

CHRISTOPHER LENCKUS FIFO 03/20/12 11/15/12

DEVELOPED BY:

CHARLES ERICKSON AJV-354 01/09/2012

APPROVED BY:

DEZ SILAGYI AJV-354

COORDINATED WITH:

AOPA, NBAA, ZDV, DEN APP CON, CO AERO, and AMGR

CHANGES:

1. RWY 17L/R CLIMB RATES MAINTAINED TO 6900, CHANGED TO 6800.
2. COMBINED RWY 35L AND RWY 35R DEPARTURE PROCEDURE INSTRUCTIONS.
3. ADDED 3 DEGREES TO ALL THE DENVER RADIALS.
4. DENVER VOR/DME C-I-H INBOUND COURSE CHANGED FROM 340 TO 343.
5. UPDATED CONTROLLING OBSTACLES AND ADDED OBSTACLES MANDATEING ROUTE DEVELOPMENT.
6. UPDATED TAKEOFF OBSTACLE NOTES.
7. REMOVED SPECIFIC HEADINGS TO FLY TO INTERCEPT RADIALS TO DEN VOR/DME OFF RWYS 10, 17L/R AND 28.

REASONS:

1. CLIMB GRADIENTS ALLOWED FOR SHORTER ICA REMOVING ADDITIONAL TERRAIN/AO THAT CAUSED A HIGHER CLIMB TO ALTITUDES.
2. RWY ALIGNMENTS ARE THE SAME ON NEW AVNIS REPORT, DIFERRENT ON PREVIOUS BUILD.
3. DENVER VOR/DME MAGVAR CHANGED FROM 11E TO 8E.
4. DENVER VOR/DME MAGVAR CHANGED FROM 11E TO 8E.
5. 8260.46, D-5, CONTROLLING OBSTACLES AND DOCUMENTING OBSTACLES THAT MANDATE ROUTE DEVELOPMENT.
6. UPDATED OBSTACLE DATABASE.
7. CLOSE PROXIMITY TO RADIALS, HEADINGS NOT NEEDED.

VCOA NOT ESTABLISHED AT ATC REQUEST DUE TO AIRPORT TRAFFIC VOLUME AND COMPLEXITY.

06/14/12: THIS IS A CORRECTED COPY OF THE FORM DEVELOPED ON 01/09/12.

1. CHANGED HEADINGS OFF CENTENNIAL AIRPORT TO REFLECT A MAGVAR CHANGE FROM 11E TO 8E, INCREASED HEADINGS OFF CENTENNIAL BY 3 DEGREES.

RADIO FIX AND HOLDING DATA RECORD

NAME: DENVER VOR/DME STATE: CO COUNTRY: US

LATITUDE/LONGITUDE: 394845.05N/1043938.66W TYPE:

AIRSPACE DOCKET: FIX TYPE OF ACTION: MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	DENVER	DEN	VOR/DME	H							45000

HOLDING: HOLDING TYPE OF ACTION: MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	S	DEN	VOR/DME	163.00	343.00	R	1-1 1/2	8100 17500	9 20

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	AAO	393300.00N/1043427.00W	6437	4E
1	310	TOWER (08-000111)	392514.47N/1043916.71W	7048	2B

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	TAKE-OFF MINIMUMS	KAPA	DENVER	CO (US)
1	TAKE-OFF MINIMUMS	KFTG	DENVER	CO (US)
1	TAKE-OFF MINIMUMS	KBJC	DENVER	CO (US)
1	TAKE-OFF MINIMUMS	KDEN	DENVER	CO (US)

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DENVER			KBKF	AURORA	CO (US)
DP	PIKES			KBKF	AURORA	CO (US)
DP	PLAINS			KBKF	AURORA	CO (US)
DP	ROCKIES			KBKF	AURORA	CO (US)
DP	YELLOWSTONE			KBKF	AURORA	CO (US)
DP	DENVER			KAPA	DENVER	CO (US)
DP	PIKES			KAPA	DENVER	CO (US)
DP	PLAINS			KAPA	DENVER	CO (US)
DP	ROCKIES			KAPA	DENVER	CO (US)
DP	TAKE-OFF MINIMUMS		1	KAPA	DENVER	CO (US)
DP	YELLOWSTONE			KAPA	DENVER	CO (US)
DP	DENVER			KBJC	DENVER	CO (US)
DP	PIKES			KBJC	DENVER	CO (US)
DP	PLAINS			KBJC	DENVER	CO (US)
DP	ROCKIES			KBJC	DENVER	CO (US)
DP	TAKE-OFF MINIMUMS		1	KBJC	DENVER	CO (US)
DP	YELLOWSTONE			KBJC	DENVER	CO (US)
DP	DENVER			KDEN	DENVER	CO (US)
DP	PIKES			KDEN	DENVER	CO (US)
DP	PLAINS			KDEN	DENVER	CO (US)
DP	ROCKIES			KDEN	DENVER	CO (US)
DP	TAKE-OFF MINIMUMS		1	KDEN	DENVER	CO (US)
DP	YELLOWSTONE			KDEN	DENVER	CO (US)
DP	DENVER			KFTG	DENVER	CO (US)
DP	PIKES			KFTG	DENVER	CO (US)
DP	PLAINS			KFTG	DENVER	CO (US)
DP	ROCKIES			KFTG	DENVER	CO (US)
DP	TAKE-OFF MINIMUMS		1	KFTG	DENVER	CO (US)
DP	YELLOWSTONE			KFTG	DENVER	CO (US)
DP	TAKE-OFF MINIMUMS			KEIK	ERIE	CO (US)
DP	DENVER			KFNL	FORT COLLINS/LOVELAND	CO (US)
DP	PIKES			KFNL	FORT COLLINS/LOVELAND	CO (US)
DP	PLAINS			KFNL	FORT COLLINS/LOVELAND	CO (US)
DP	ROCKIES			KFNL	FORT COLLINS/LOVELAND	CO (US)
DP	YELLOWSTONE			KFNL	FORT COLLINS/LOVELAND	CO (US)
DP	DENVER			KGXY	GREELEY	CO (US)
DP	PIKES			KGXY	GREELEY	CO (US)
DP	PLAINS			KGXY	GREELEY	CO (US)
DP	ROCKIES			KGXY	GREELEY	CO (US)
DP	YELLOWSTONE			KGXY	GREELEY	CO (US)
IAP	ILS OR LOC Z RWY 29R			KBJC	DENVER	CO (US)
STAR	DANDD			KDEN	DENVER	CO (US)
STAR	LANDR			KDEN	DENVER	CO (US)

QUALITY
 6
 CHECKED

STAR	LARKS	KDEN	DENVER	CO (US)
STAR	POWDR	KDEN	DENVER	CO (US)
STAR	QUAIL	KDEN	DENVER	CO (US)
STAR	RAMMS	KDEN	DENVER	CO (US)
STAR	SAYGE	KDEN	DENVER	CO (US)
STAR	TOMSN	KDEN	DENVER	CO (US)

REQUIRED CHARTING: DP, STAR, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
 UPDATED FIX COORDINATES TO REFLECT MOST RECENT SURVEY.
 CHANGED HOLDING PAT 1 COURSE INBOUND FROM 340 TO 343 TO REFLECT FACILITY MAGVAR ROTATION FROM 11E TO 8E.
 UPDATED PAT 1 310KT CONTROLLING OBSTACLE COORDINATES AND ACCURACY CODE TO CURRENT DATA.
 MOVED LIMITED HOLDING NOTE FROM REMARKS TO HOLDING RESTRICTIONS.
 UPDATED PRECIPITOUS TERRAIN NOTE TO CURRENT FORMAT.
 ADDED STAR TO REQUIRED CHARTING.

DEVELOPED BY: **DATE:** 11/14/2011 **OFFICE:** AJV-354 **NAME:** ADOLFO URRUTIA (STEPHEN PETERSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEZ SILAGYI

SIGNATURE:

DISTRIBUTION: **NFDC**
 FPO: WST
 ARTCC: ZDV
 ATC FACILITY: DEN APP CON
 OTHER:

