# APPENDIX 1
# DP CHART LEGEND

LEGEND 18200

## LEGEND
### STANDARD TERMINAL ARRIVAL (STAR) CHARTS
### DEPARTURE PROCEDURE (DP) CHARTS

Applies to both STAR and DP Charts unless otherwise noted.

### RADIO AIDS TO NAVIGATION

Compulsory:

VOR, VORTAC, DME, NDB/DME, VOR/DME, TACAN, NDB

Non-Compulsory:

VOR, VORTAC, DME, NDB/DME, VOR/DME, TACAN, NDB

LMM, LOM (Compass locator)

Marker Beacon

LOC, LOC/DME (shown when installation is offset from its normal position off the end of the runway.) (DP)

Localizer Course

SDF Course

(T) indicates frequency protection range (STAR)

Identifier

(Y) TACAN must be placed in "Y" mode to receive distance information

Frequency

ORLANDO
112.25 (T) ORL
Chan 59 (Y)
N28°32.56′ W81°20.10′

Geographic Position

Underline indicates no voice transmitted on this frequency

L-19, H-5

Enroute Chart Reference

DME or TACAN Channel

Coordinates

PRAYS
N38°58.30′ W89°51.50′
112.7 CAP 187.1°-56.2
590

Waypoint Name

Frequency

Identifier

Reference Facility Elevation

Radial-Distance (Facility to Waypoint)

### FIXES/ATC REPORTING REQUIREMENTS

Reporting Points
N00°00.00′
W00°00.00′

75 DME Mileage (when not obvious)

▲ Fix-Compulsory and

△ Non-Compulsory Position Report

DME fix

WAYPOINT (Compulsory)

WAYPOINT (Non-Compulsory)

FLYOVER POINT

X Computer Navigation Fix (CNF)
N00°00.00′
W00°00.00′

### ROUTES

4500 MEA-Minimum Enroute Altitude

*3500 MOCA-Minimum Obstruction Clearance Altitude

270° Departure Route - Arrival Route

(65) Mileage between Radio Aids, Reporting Points, and Route Breaks

Transition Route

R-275 Radial line and value

Lost Communications Track

Visual Flight Path (DP)

V12 J80 Airway/Jet Route Identification

DP Holding Pattern (IAS)

STAR Holding Pattern (IAS)

Holding pattern with max. restricted airspeed
(175K) applies to all altitudes
(210K) applies to altitudes above 6000′ to and including 14000′

### SPECIAL USE AIRSPACE

R-352

R-Restricted
P-Prohibited
MOA-Military Operations Area
W-Warning
A-Alert

### ALTITUDES

5500 Mandatory Altitude (Cross at)

2300 Minimum Altitude (Cross at or above)

4800 Maximum Altitude (Cross at or below)

15000
12000
Block Altitude

Altitude change at other than Radio Aids (STAR)

### INDICATED AIRSPEED

175K Mandatory Airspeed

120K Minimum Airspeed

250K Maximum Airspeed

### AIRPORTS

(DP)

Heliport

Civil, Military, Joint Civil-Military

Airports not served by the procedure shown in screened color (STAR)

Civil, Military, Joint Civil-Military

### MISCELLANEOUS

Changeover Point

Distance not to scale (DP)

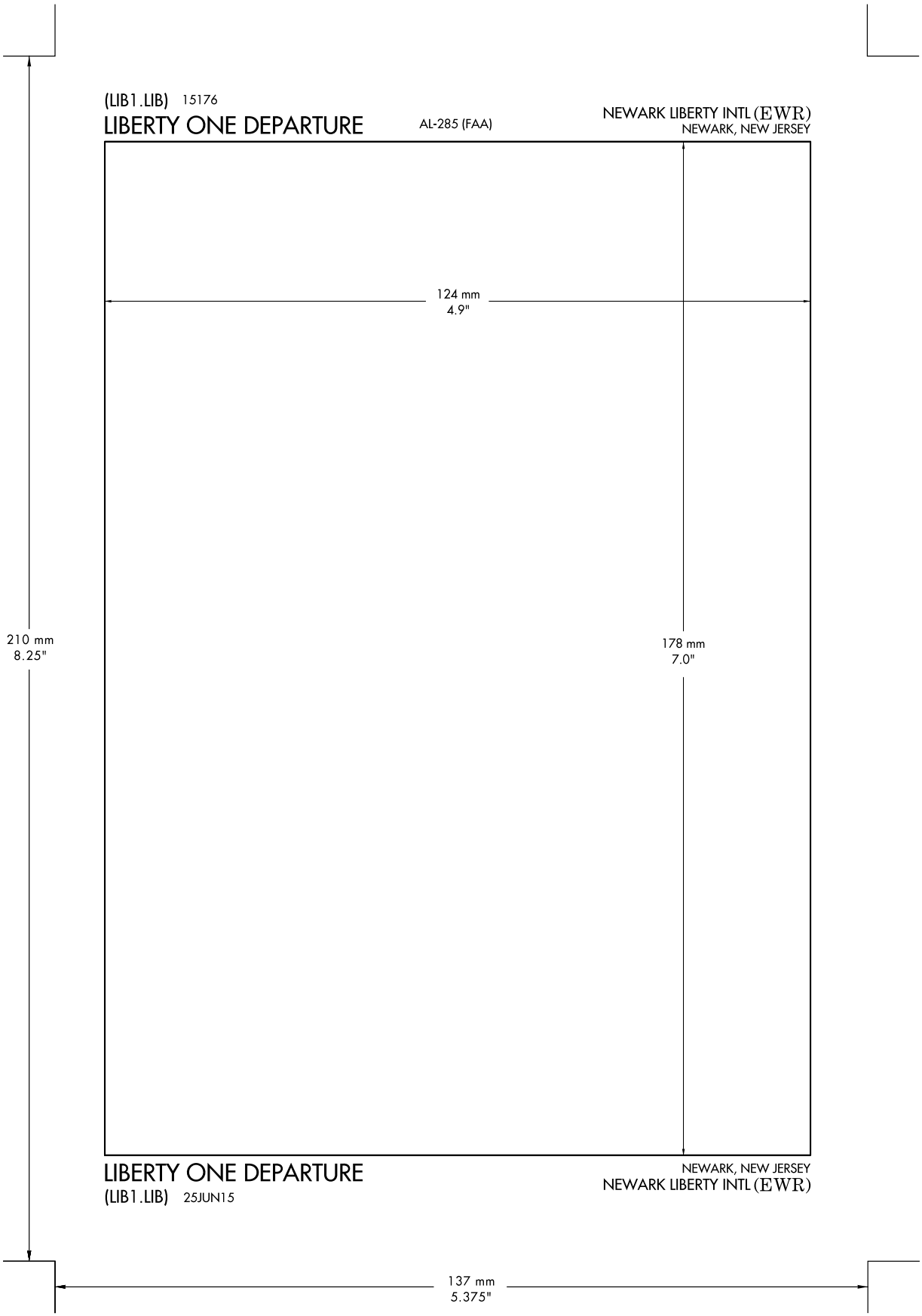
International Boundary (DP)

Air Defense Identification Zone

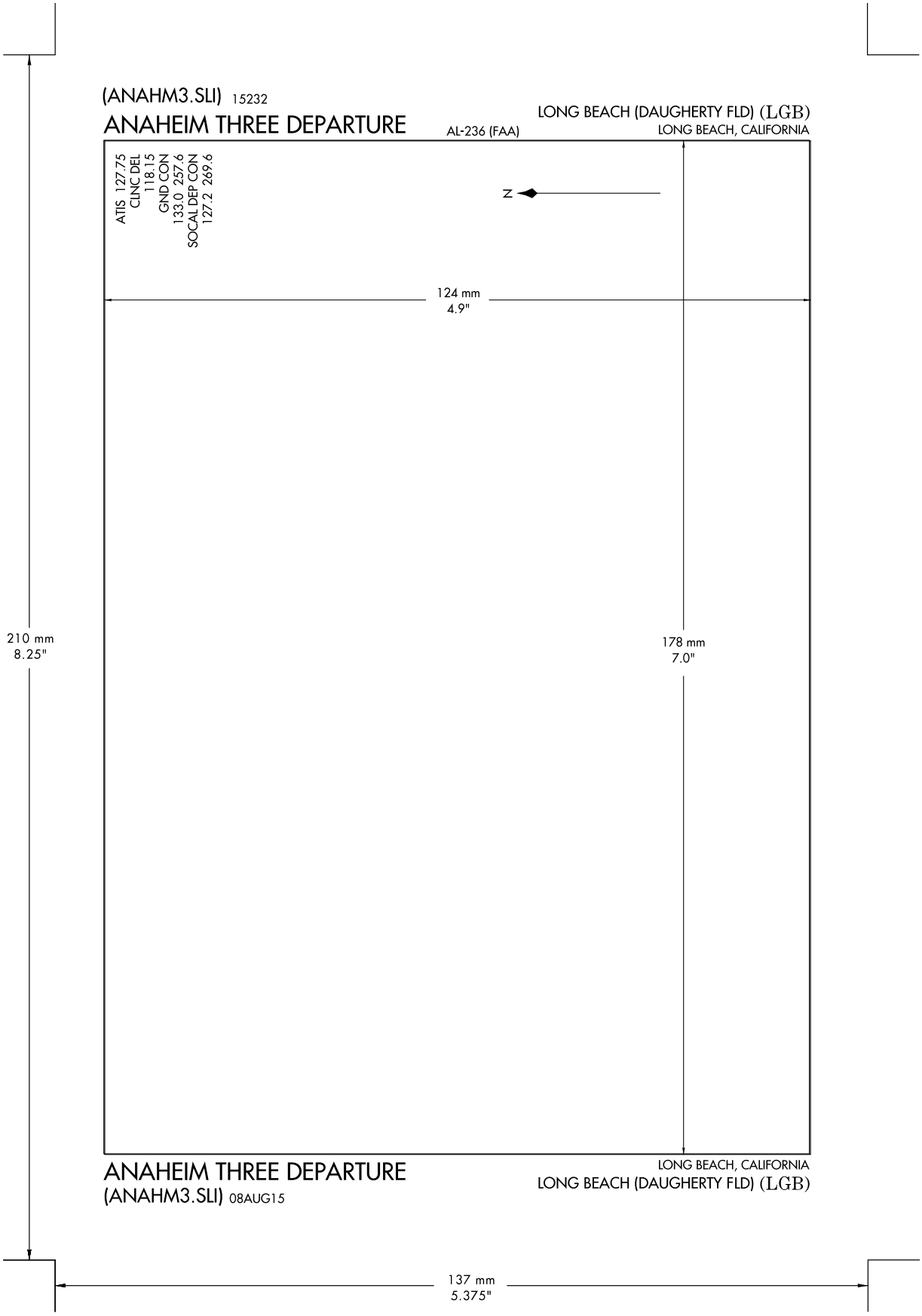
T Takeoff Minimums and (Obstacle) Departure Procedures entry published. (DP)

LEGEND 18200

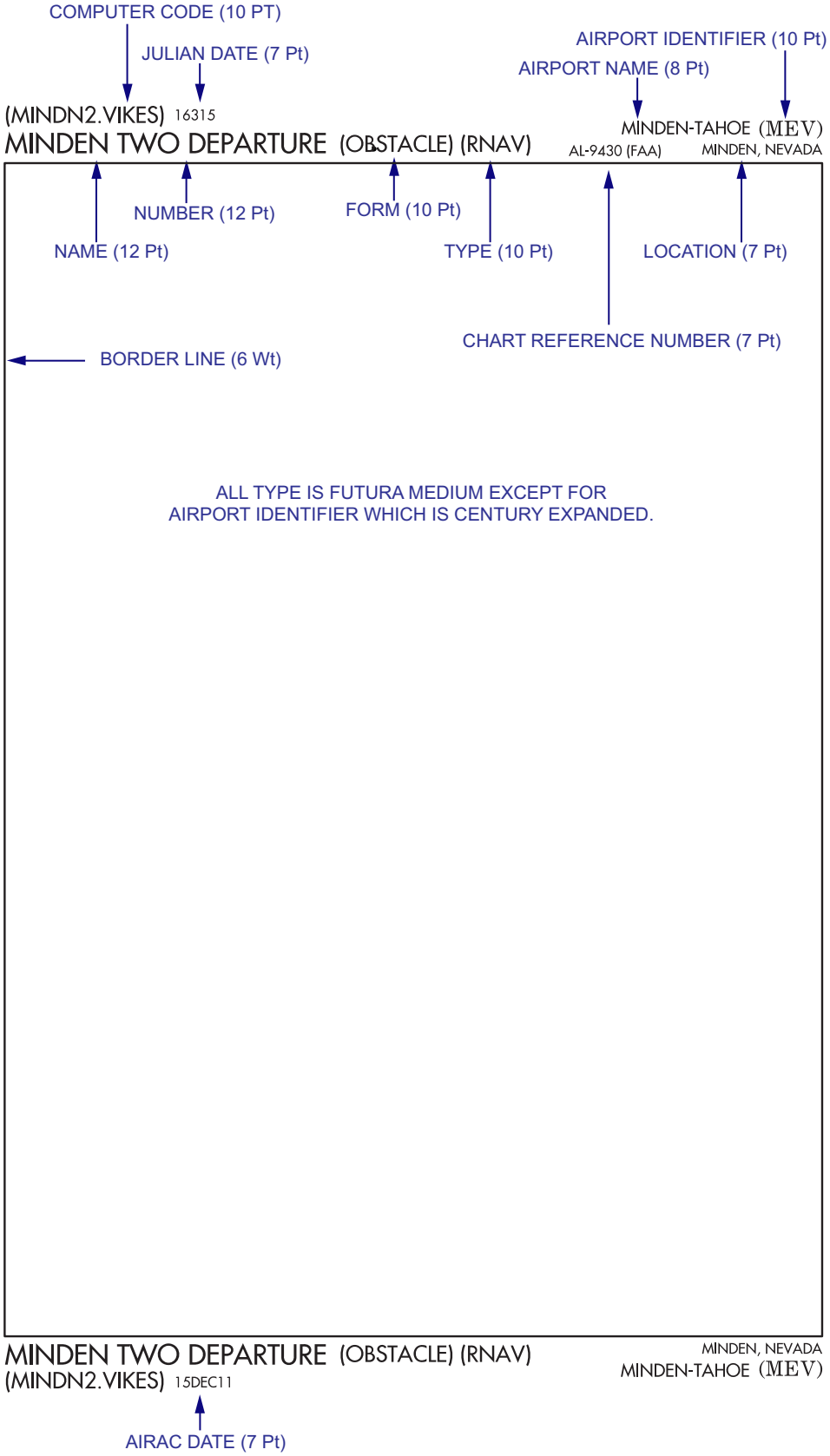
# APPENDIX 2
# PAGE LAYOUT



# APPENDIX 3
# EAST WEST PAGE LAYOUT



# APPENDIX 4
# MARGIN DATA



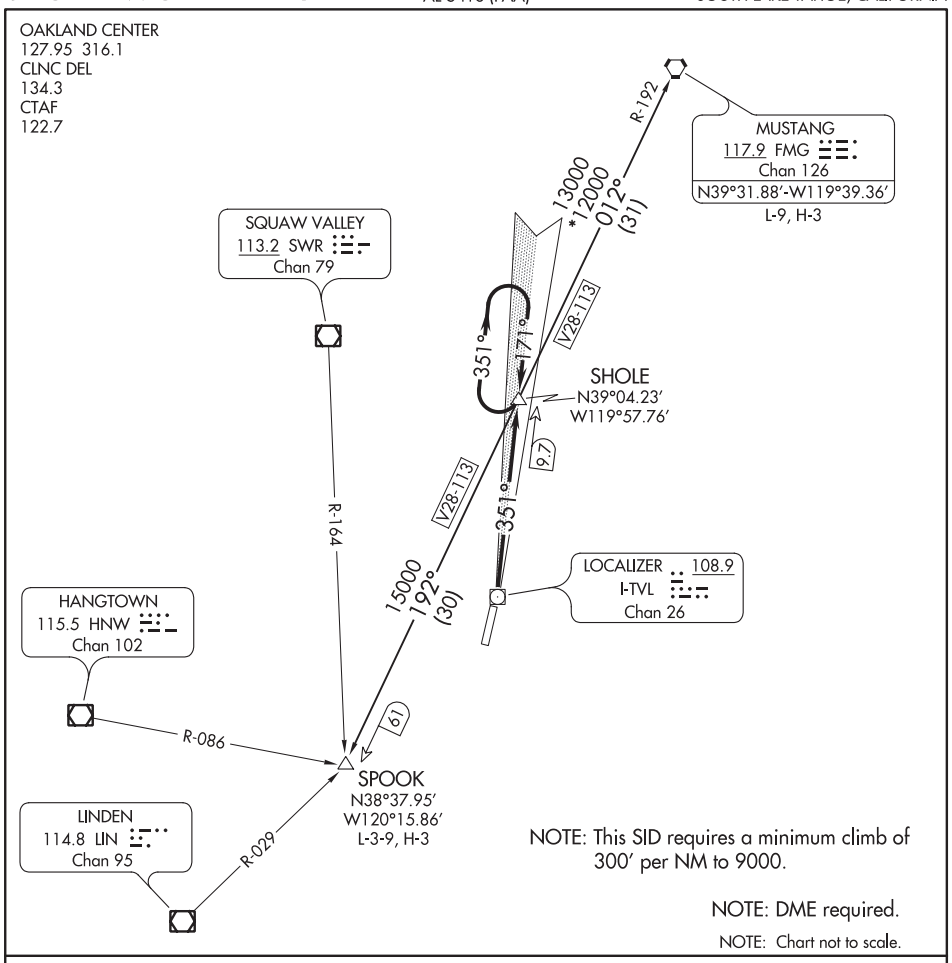
# APPENDIX 5
# DP WITH ROUTING

(SHOLE2.SHOLE) 16315

## SHOLE TWO DEPARTURE

AL-5416 (FAA)

LAKE TAHOE (TVL)
SOUTH LAKE TAHOE, CALIFORNIA




DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 18: NA.

TAKEOFF RUNWAY 36: Climb northbound via I-TVL localizer north course to SHOLE I-TVL 9.7 DME Fix. Continue climb in SHOLE 9.7 DME holding pattern until reaching 13000, thence via (transition) or (assigned route).

MUSTANG TRANSITION (SHOLE2.FMG): From over SHOLE DME on FMG R-192 to FMG VORTAC.

SPOOK TRANSITION (SHOLE2.SPOOK): From over SHOLE DME on FMG R-192 to SPOOK INT.

SHOLE TWO DEPARTURE
(SHOLE2.SHOLE) 10NOV16

SOUTH LAKE TAHOE, CALIFORNIA
LAKE TAHOE (TVL)

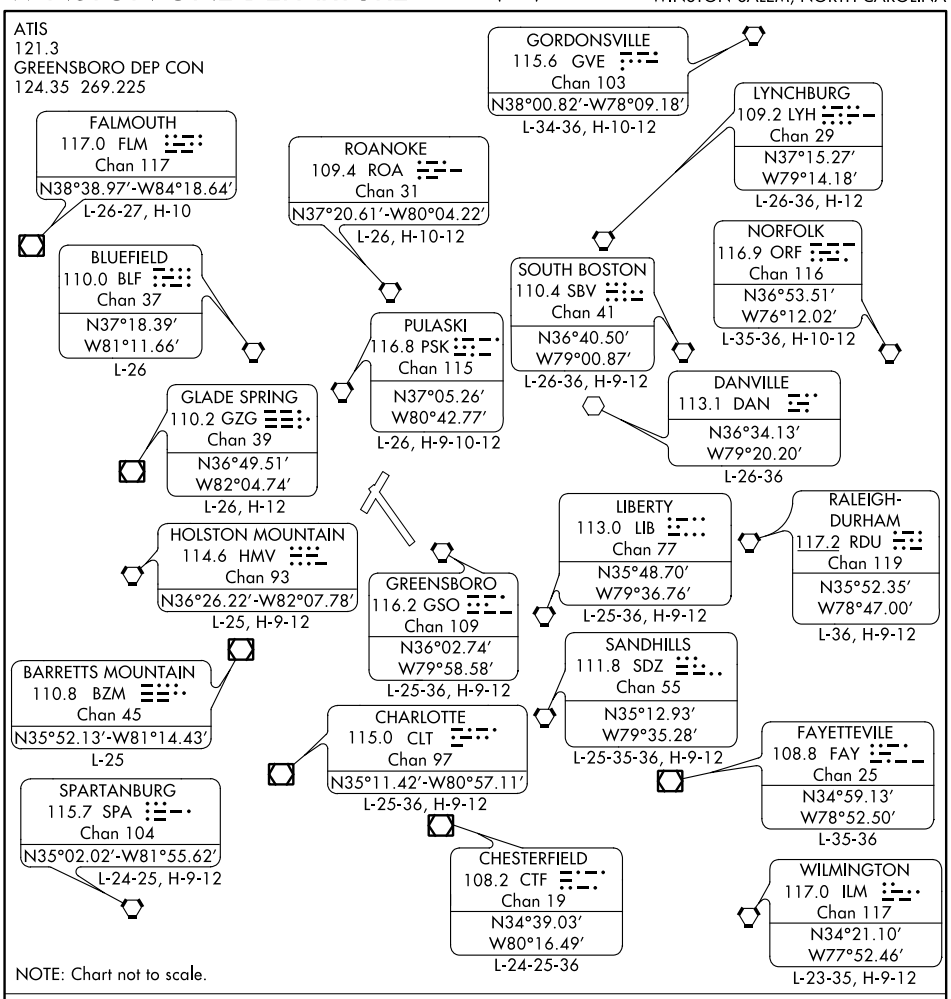
# APPENDIX 6
# DP WITH NO ROUTING (“VECTOR” TYPE)

17117

## WINSTON ONE DEPARTURE

AL-463 (FAA)

SMITH REYNOLDS (INT)
WINSTON-SALEM, NORTH CAROLINA




DEPARTURE ROUTE DESCRIPTION

All aircraft cleared as filed.
TURBOJETS: Fly runway heading or heading assigned by tower, maintain 5000 or assigned altitude. Thence. . . .
PROPELLER AIRCRAFT: Fly runway heading or heading assigned by tower, maintain assigned altitude. Thence. . . .

. . . .Expect vectors to join filed route. Expect filed altitude 10 minutes after departure.

WINSTON ONE DEPARTURE
08MAR90

WINSTON-SALEM, NORTH CAROLINA
SMITH REYNOLDS (INT)

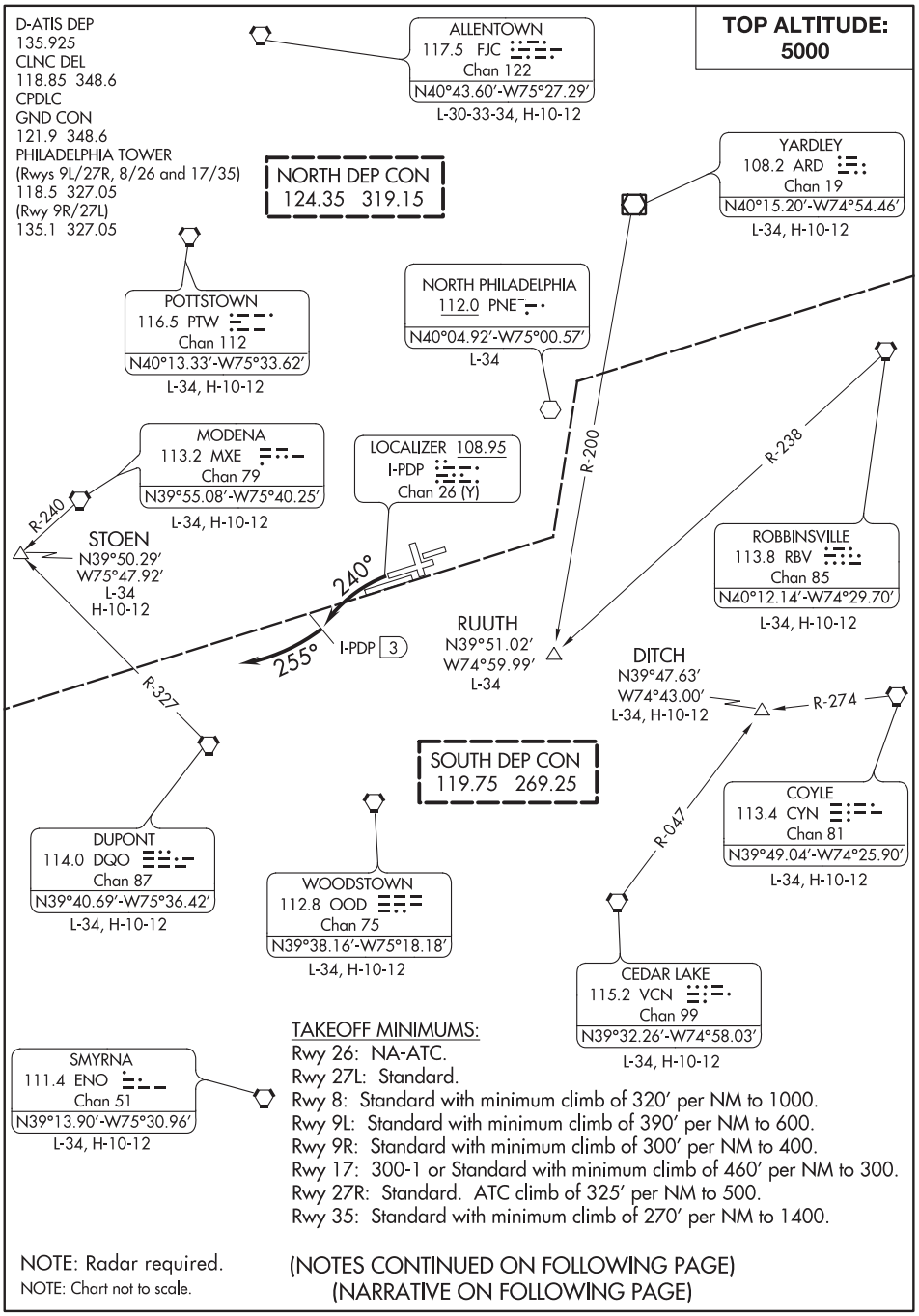
# APPENDIX 7
# DP WITH FREQUENCY SECTORIZATION

(PHL1.PHL) 17117

## PHILADELPHIA ONE DEPARTURE

AL-320 (FAA)

PHILADELPHIA INTL (PHL)
PHILADELPHIA, PENNSYLVANIA




PHILADELPHIA ONE DEPARTURE

PHILADELPHIA, PENNSYLVANIA
PHILADELPHIA INTL (PHL)

(PHL1.PHL) 04FEB16

# APPENDIX 8
# DP WITH LOST COMMUNICATION ROUTING

(PRCH2.LAX) 17117

## PERCH TWO DEPARTURE

AL-237 (FAA)

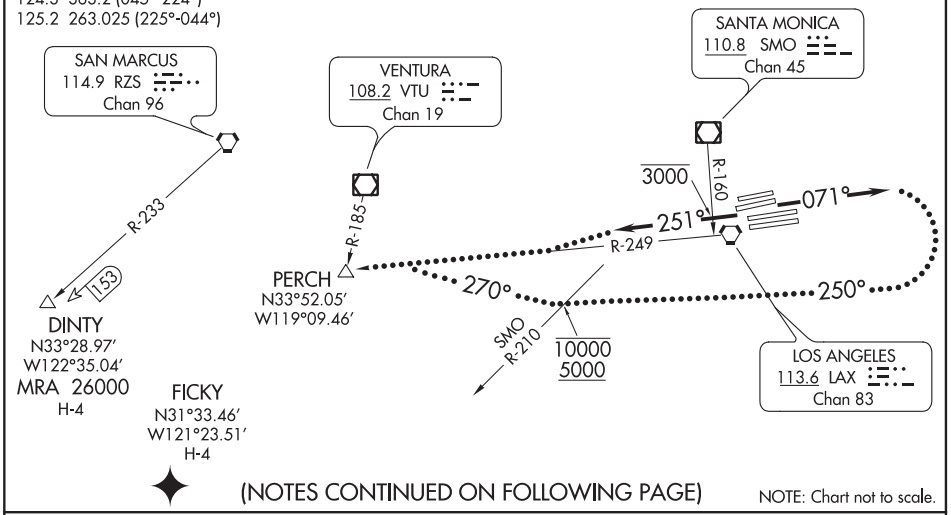
LOS ANGELES INTL (LAX)
LOS ANGELES, CALIFORNIA

**TOP ALTITUDE: ASSIGNED BY ATC**

D-ATIS DEP
135.65
CLNC DEL
120.35 327.0
CPDLC
GND CON
(N) 121.65 327.0
(S) 121.75 327.0
(W) 121.4 327.0
LOS ANGELES TOWER
(N) 133.9 239.3
(S) 120.95 379.1
SOCAL DEP CON
124.3 363.2 (045°-224°)
125.2 263.025 (225°-044°)

TAKEOFF MINIMUMS
Rwys 6L/R, 7L/R, 24L/R, 25L/R: Standard.

NOTE: RADAR and DME required.
NOTE: Route depicted is a LOST COMMUNICATION PROCEDURE only.




(NOTES CONTINUED ON FOLLOWING PAGE)

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 6L/R, 7L/R: Climb on heading 071° for RADAR vectors to DINTY or FICKY, thence. . . .

TAKEOFF RUNWAYS 24L/R, 25L/R: Climb on heading 251° to cross SMO R-160 at or below 3000, then on RADAR vectors to DINTY or FICKY, thence. . . .

. . . .on (assigned route). All aircraft expect further clearance to filed altitude five minutes after departure.

LOST COMMUNICATIONS:

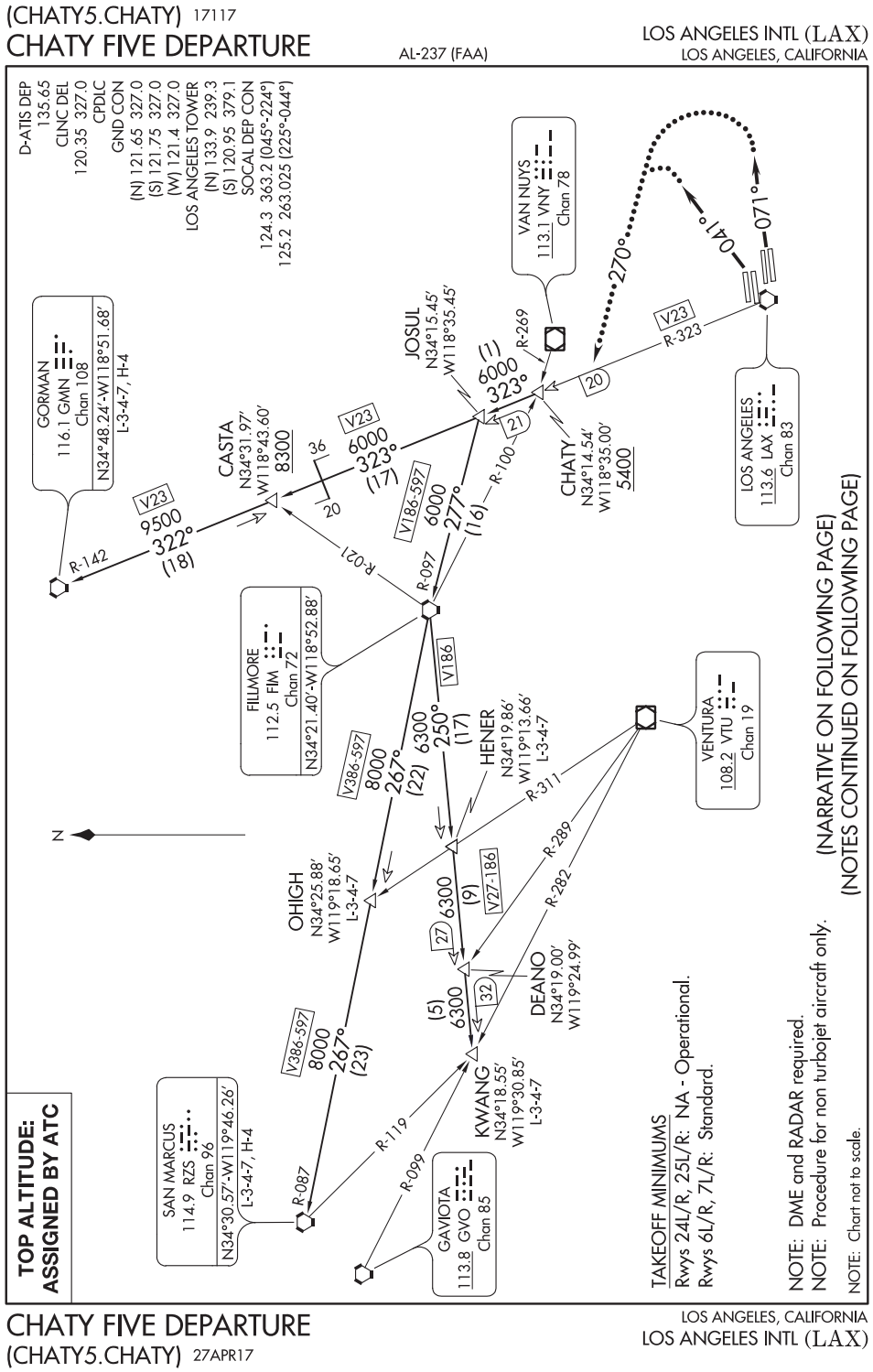
TAKEOFF RUNWAYS 6L/R, 7L/R: If not in contact with Departure Control within three minutes after departure, turn right heading 250°, cross SMO R-210 at or above 5000 and at or below 10000. After leaving 10000, turn right heading 270° to intercept and proceed via LAX R-249 to PERCH INT. Climb to FL230 or filed altitude whichever is lower. Aircraft filing FL240 or above, climb to filed altitude ten minutes after departure.

TAKEOFF RUNWAYS 24L/R, 25L/R: If not in contact with Departure Control within five minutes after departure, proceed to PERCH INT on LAX R-249. Climb to FL230 or filed altitude whichever is lower. Aircraft filing FL240 or above climb to filed altitude ten minutes after depature.

PERCH TWO DEPARTURE
(PRCH2.LAX) 10NOV16

LOS ANGELES, CALIFORNIA
LOS ANGELES INTL (LAX)

# APPENDIX 9
# DP WITH EAST-WEST ORIENTATION



# APPENDIX 10
# OBSTACLE DP

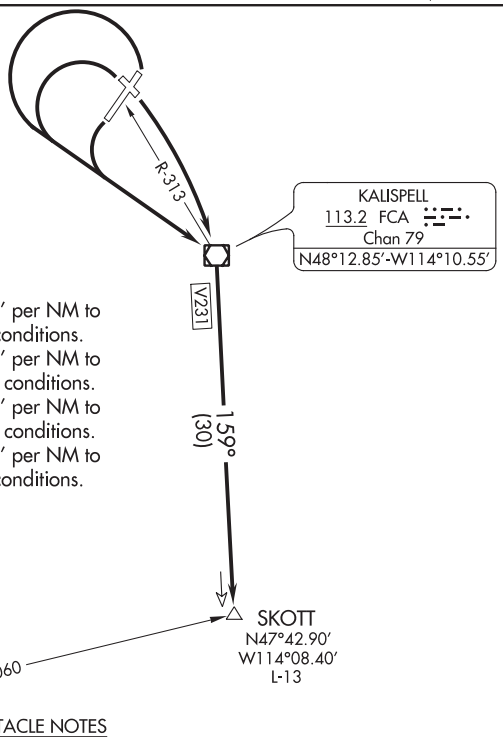
(SKOTT2.SKOTT) 16147

## SKOTT TWO DEPARTURE (OBSTACLE)

AL-887 (FAA)

GLACIER PARK INTL (GPI)
KALISPELL, MONTANA

SALT LAKE CENTER
133.4 285.4
GREAT FALLS RADIO
122.5
GLACIER TOWER *
124.55




TAKEOFF MINIMUMS

Rwy 2: Standard with minimum climb of 290′ per NM to 7800, or 2700-3 for climb in visual conditions.
Rwy 12: Standard with minimum climb of 250′ per NM to 12000, or 2700-3 for climb in visual conditions.
Rwy 20: Standard with minimum climb of 250′ per NM to 12000, or 2700-3 for climb in visual conditions.
Rwy 30: Standard with minimum climb of 260′ per NM to 8900, or 2700-3 for climb in visual conditions.

TAKEOFF OBSTACLE NOTES

Rwy 2: Trees 1469′ from DER, 675′ right of centerline, 100′ AGL/3065′ MSL.
Rwy 12: Multiple vehicles on roadway, train on track, trees and a pole beginning 542′ from DER, on centerline extending left and right of centerline, up to 129′ AGL/3087′ MSL.
Trees 2325′ from DER, 226′ left of centerline, 94′ AGL/3063′ MSL.
Trees 3114′ from DER, 420′ right of centerline, 117′ AGL/3082′ MSL.
Rwy 20: Trees 2320′ from DER, 1055′ left of centerline, 107′ AGL/3057′ MSL.
Trees 1.1 NM from DER, 1679′ right of centerline, 107′ AGL/3154′ MSL.
Rwy 30: Trees 721′ from DER, 60′ right of centerline, 104′ AGL/3136′ MSL.
Trees 873′ from DER, 86′ left of centerline, 104′ AGL/3149′ MSL.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 2: Climbing left turn direct FCA VOR/DME, thence.... or, climb in visual conditions to cross Glacier Park Intl Airport southeast bound at or above 5600, then on FCA R-313 to FCA VOR/DME, thence. . . .

TAKEOFF RUNWAY 12: Climbing right turn direct FCA VOR/DME, thence.... or, climb in visual conditions to cross Glacier Park Intl Airport southeast bound at or above 5600, then on FCA R-313 to FCA VOR/DME, thence. . . .

TAKEOFF RUNWAY 20: Climbing left turn direct FCA VOR/DME, thence.... or, climb in visual conditions to cross Glacier Park Intl Airport southeast bound at or above 5600, then on FCA R-313 to FCA VOR/DME, thence. . . .

TAKEOFF RUNWAY 30: Climbing left turn direct FCA VOR/DME, thence.... or, climb in visual conditions to cross Glacier Park Intl Airport southeast bound at or above 5600, then on FCA R-313 to FCA VOR/DME, thence. . . .

. . . .continue climb to 12000 via FCA R-159 to SKOTT INT.

SKOTT TWO DEPARTURE (OBSTACLE)
(SKOTT2.SKOTT) 13JAN11

KALISPELL, MONTANA
GLACIER PARK INTL (GPI)

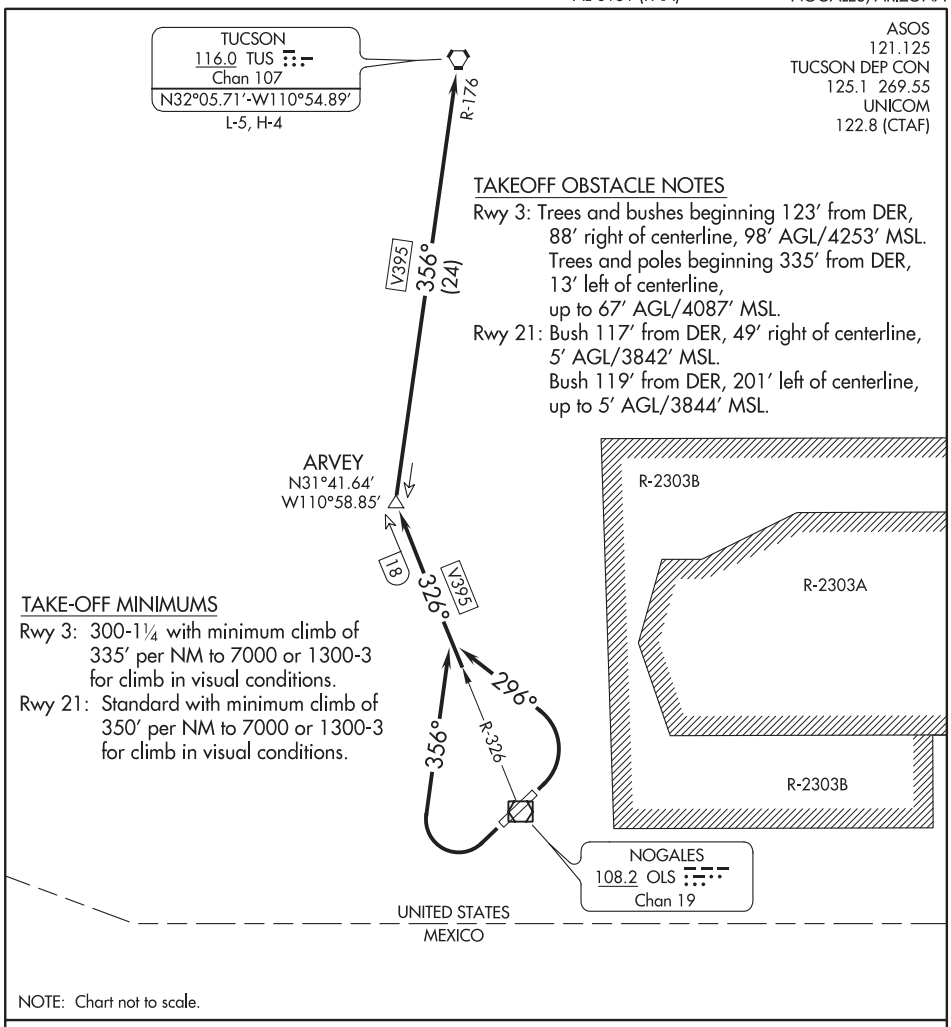
# APPENDIX 11
# DP WITH INTERNATIONAL BOUNDARY

(OLS1.OLS) 16315

## NOGALES ONE DEPARTURE (OBSTACLE)

AL-6151 (FAA)

NOGALES INTL (OLS)
NOGALES, ARIZONA




DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climbing left turn heading 296° to intercept OLS VOR/DME R-326 to ARVEY INT/OLS 18 DME, or for climb in visual conditions cross Nogales Intl airport at or above 5100′ then climb via OLS R-326 to ARVEY, thence. . . .

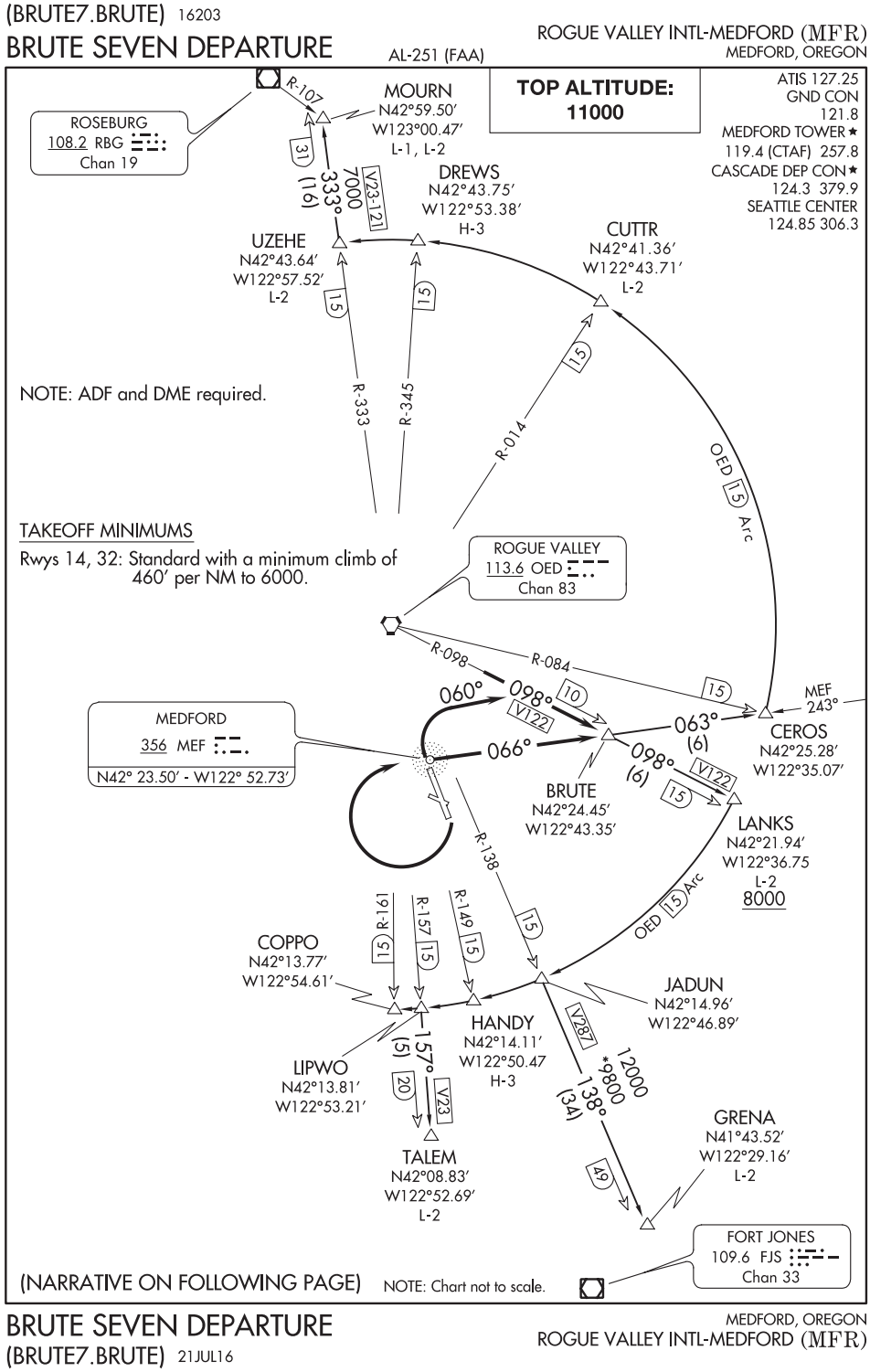
TAKEOFF RUNWAY 21: Climbing right turn heading 356° to intercept OLS VOR/DME R-326 to ARVEY INT/OLS 18 DME, or for climb in visual conditions cross Nogales Intl airport above 5100′ then climb via OLS R-326 to ARVEY, thence. . . .

. . . .via TUS VORTAC R-176 to cross TUS VORTAC at or above MEA/MCA for assigned route of flight.

NOGALES ONE DEPARTURE (OBSTACLE)
(OLS1.OLS) 17DEC09

NOGALES, ARIZONA
NOGALES INTL (OLS)

# APPENDIX 12
# DP WITH CONTINUED PAGE



# APPENDIX 12
# DP WITH CONTINUED PAGE (CONTINUED)

(BRUTE7.BRUTE) 16203

## BRUTE SEVEN DEPARTURE

AL-251 (FAA)

ROGUE VALLEY INTL-MEDFORD (MFR)
MEDFORD, OREGON

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climbing right turn direct MEF NDB, depart MEF NDB bearing 066° to BRUTE INT. Thence. . . .

TAKEOFF RUNWAY 32: Climbing right turn heading 060° and OED VORTAC R-098 to BRUTE INT. Thence. . . .

. . . . via (transition) or (assigned route). Maintain 11000 or assigned altitude.

COPPO TRANSITION (BRUTE7.COPPO): From over BRUTE INT on OED VORTAC R-098 to LANKS DME, then on the OED VORTAC 15 DME Arc CW to COPPO DME.

CUTTR TRANSITION (BRUTE7.CUTTR): From over BRUTE INT on MEF NDB 063° to CEROS INT, then on the OED VORTAC 15 DME Arc CCW to CUTTR DME.

DREWS TRANSITION (BRUTE7.DREWS): From over BRUTE INT on MEF NDB 063° to CEROS INT, then on the OED VORTAC 15 DME Arc CCW to DREWS DME.

GRENA TRANSITION (BRUTE7.GRENA): From over BRUTE INT on OED VORTAC R-098 to LANKS DME, then on the OED VORTAC 15 DME Arc CW to JADUN DME, then on OED VORTAC R-138 to GRENA DME.

HANDY TRANSITION (BRUTE7.HANDY): From over BRUTE INT on OED VORTAC R-098 to LANKS DME, then on the OED VORTAC 15 DME Arc CW to HANDY DME.

LANKS TRANSITION (BRUTE7.LANKS): From over BRUTE INT on OED VORTAC R-098 to LANKS DME.

MOURN TRANSITION (BRUTE7.MOURN): From over BRUTE INT on MEF NDB 063° to CEROS INT, then on the OED VORTAC 15 DME Arc CCW to UZEHE DME, then on OED VORTAC R-333 to MOURN INT.

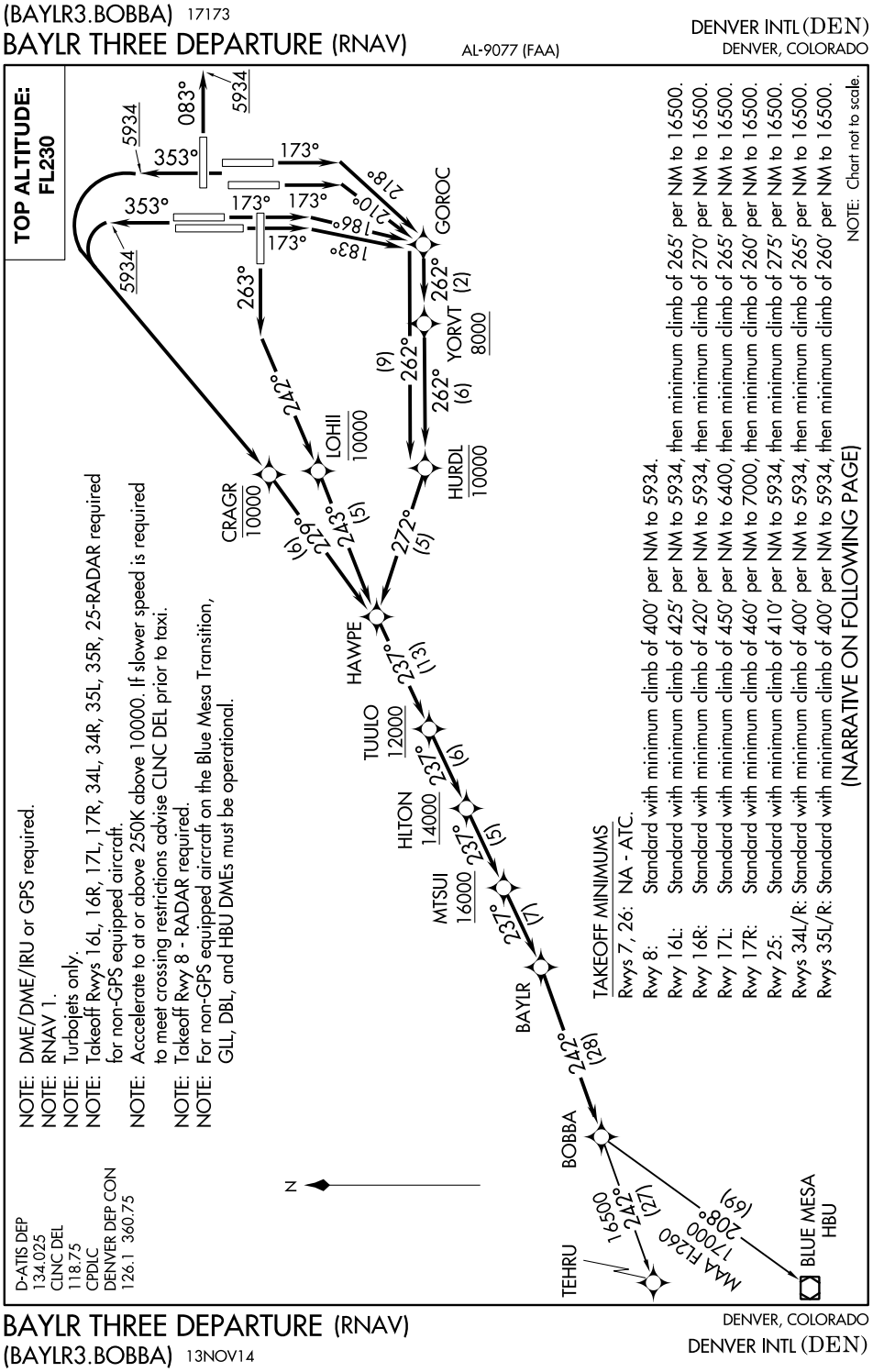
TALEM TRANSITION (BRUTE7.TALEM): From over BRUTE INT on OED VORTAC R-098 to LANKS DME, then on the OED VORTAC 15 DME Arc CW to LIPWO DME, then on OED VORTAC R-157 to TALEM DME.

UZEHE TRANSITION (BRUTE7.UZEHE): From over BRUTE INT on MEF NDB 063° to CEROS INT, then on the OED VORTAC 15 DME Arc CCW to UZEHE DME.

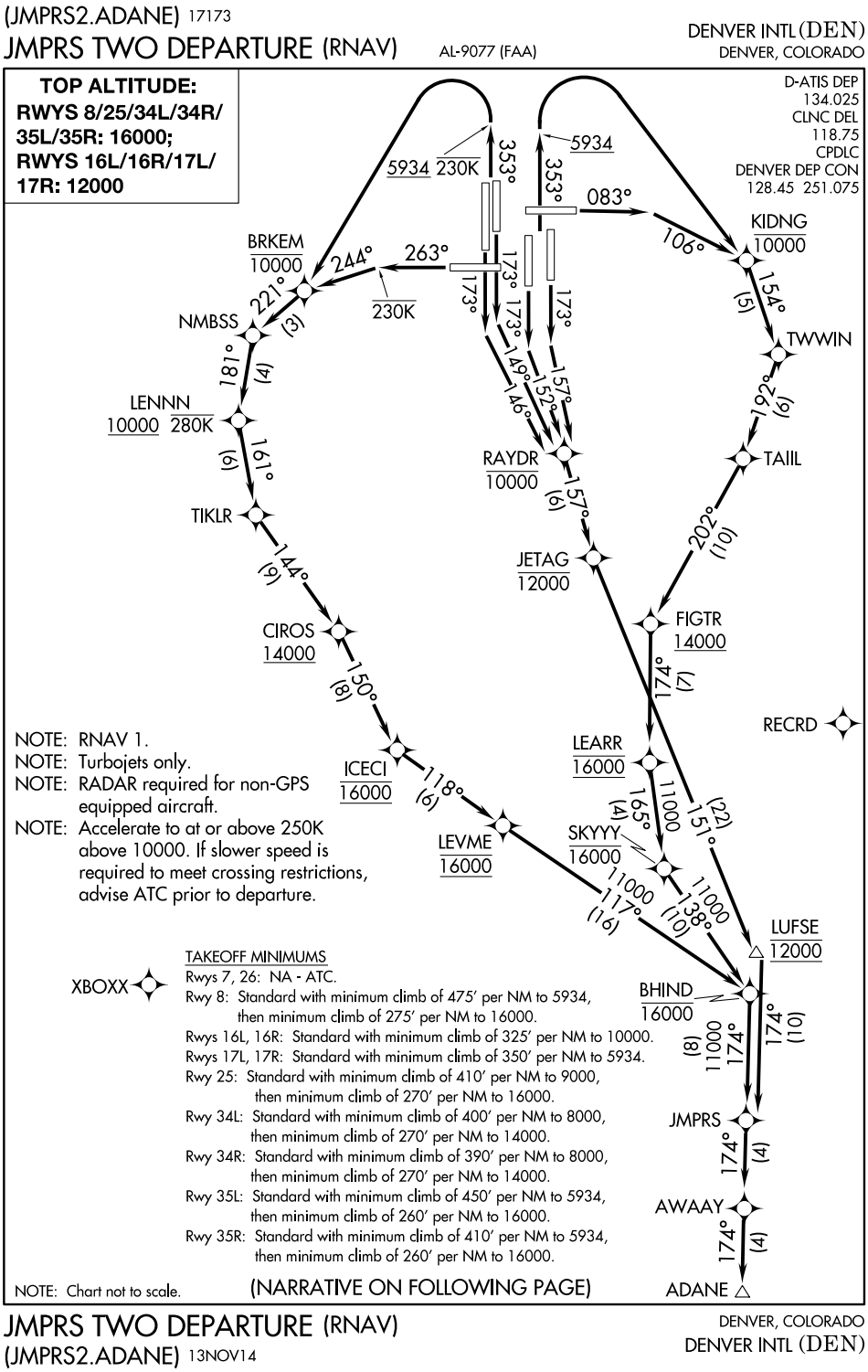
BRUTE SEVEN DEPARTURE
(BRUTE7.BRUTE) 21JUL16

MEDFORD, OREGON
ROGUE VALLEY INTL-MEDFORD (MFR)

# APPENDIX 13
# SINGLE TOP ALTITUDE



# APPENDIX 14
# RUNWAY SPECIFIC TOP ALTITUDES



# APPENDIX 15
# AIRCRAFT TYPE TOP ALTITUDES

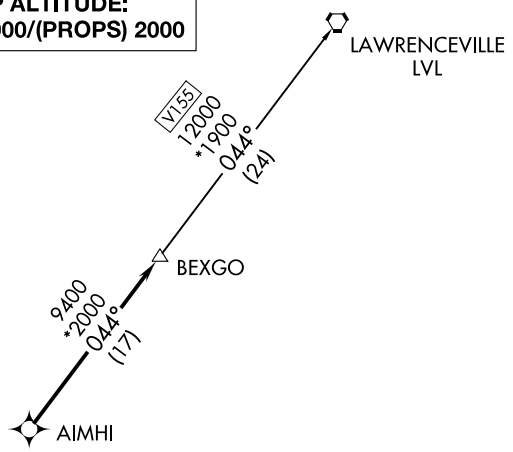
(BEXGO2.BEXGO) 17173

## BEXGO TWO DEPARTURE (RNAV) AL-516 (FAA)

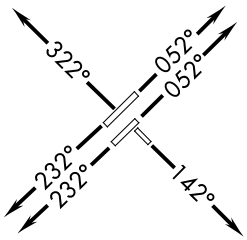
RALEIGH-DURHAM INTL (RDU)
RALEIGH/DURHAM, NORTH CAROLINA

D-ATIS
123.8
CLNC DEL
120.1
CPDLC
GND CON
121.9 348.6 (EAST)
(Rwys 5R-23L, 14-32)
121.7 348.6 (WEST)
(Rwy 5L-23R)
RALEIGH TOWER
127.45 257.8 (EAST)
(Rwys 5R-23L, 14-32)
119.3 257.8 (WEST)
(Rwy 5L-23R)
RALEIGH DEP CON
132.35 256.9

**TOP ALTITUDE:**
**(JETS) 7000/(PROPS) 2000**




NOTE: Transponder code will be assigned via PDC or Raleigh clearance delivery.
NOTE: If unable to accept climb rate, advise ATC on initial contact.
NOTE: RNAV-1.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.




TAKEOFF MINIMUMS:
Rwys 5L, 5R, 14, 23R: Standard with minimum climb of 500′ per NM to 940.
Rwy 23L: Standard with minimum climb of 500′ per NM to 1100.
Rwy 32: 300-1 with minimum climb of 500′ per NM to 940.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWYS 5L/5R: Climb heading 052° or as assigned by ATC, expect RADAR vectors to AIMHI, thence. . . .
TAKEOFF RWY 14: Climb heading 142° or as assigned by ATC, expect RADAR vectors to AIMHI, thence. . . .
TAKEOFF RWYS 23L/23R: Climb heading 232° or as assigned by ATC, expect RADAR vectors to AIMHI, thence. . . .
TAKEOFF RWY 32: Climb heading 322° or as assigned by ATC, expect RADAR vectors to AIMHI, thence. . . .

. . . .on track 044° to BEXGO, turbojets maintain 7000, propellers maintain 2000. Expect clearance to filed altitude within ten minutes after departure.

LAWRENCEVILLE TRANSITION (BEXGO2.LVL)

NOTE: Chart not to scale.

BEXGO TWO DEPARTURE (RNAV)
(BEXGO2.BEXGO) 08JAN15

RALEIGH/DURHAM, NORTH CAROLINA
RALEIGH-DURHAM INTL (RDU)

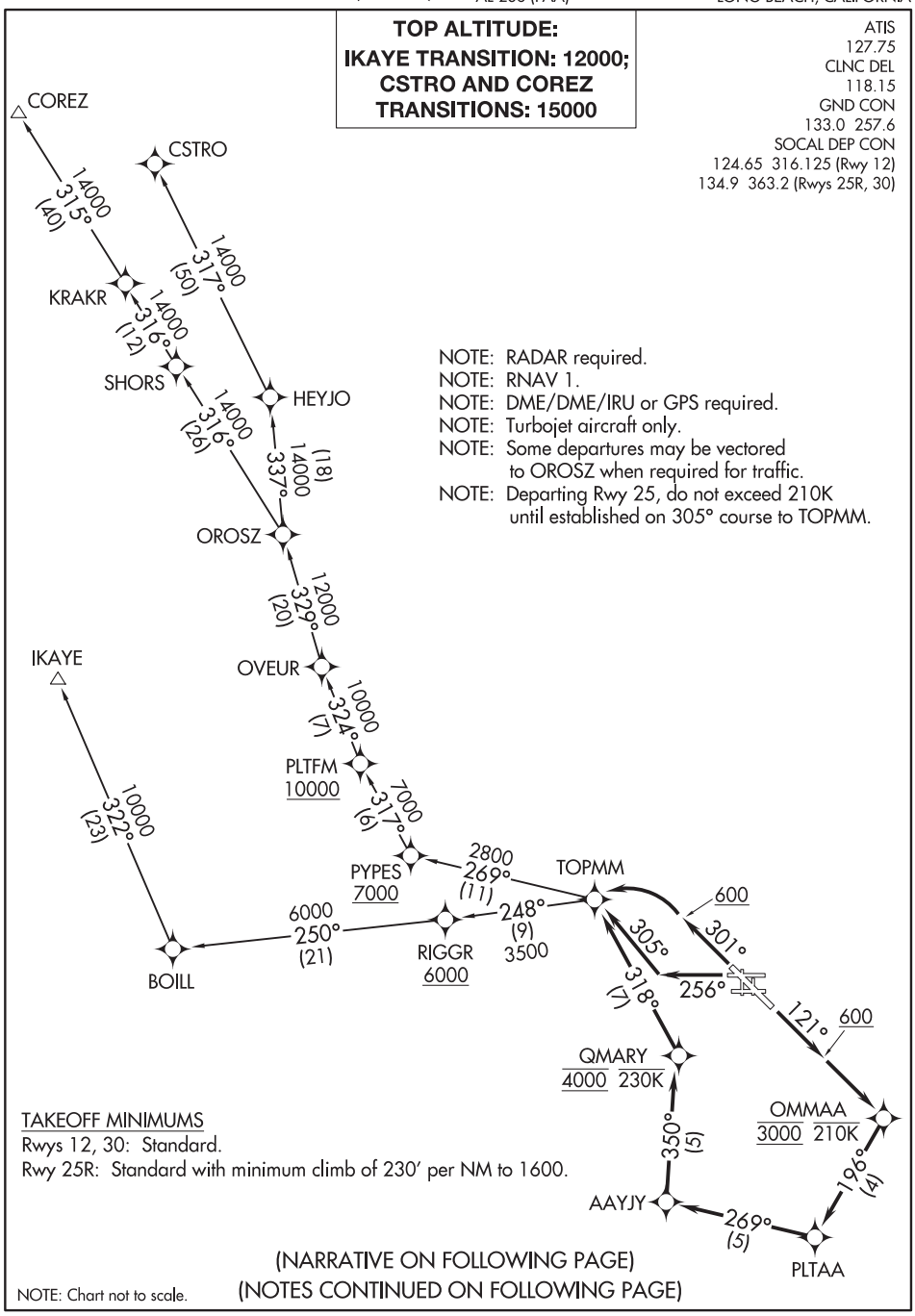
# APPENDIX 16
# TRANSITION SPECIFIC TOP ALTITUDES

(TOPMM1.TOPMM) 17117

## TOPMM ONE DEPARTURE (RNAV)

AL-236 (FAA)

LONG BEACH/DAUGHERTY FLD (LGB)
LONG BEACH, CALIFORNIA




## TOPMM ONE DEPARTURE (RNAV)

(TOPMM1.TOPMM) 27APR17

LONG BEACH, CALIFORNIA
LONG BEACH/DAUGHERTY FLD (LGB)

# APPENDIX 17
# ATC ASSIGNED TOP ALTITUDE

(TATES4.TATES) 17173

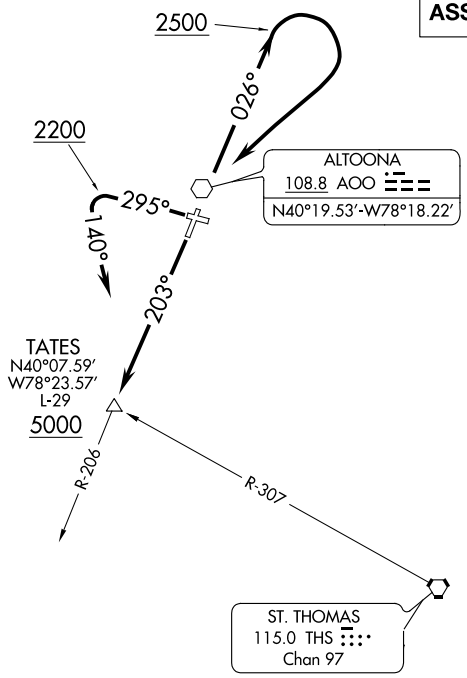
## TATES FOUR DEPARTURE

AL-100 (FAA)

ALTOONA-BLAIR COUNTY (AOO)
ALTOONA, PENNSYLVANIA

ASOS
127.125
JOHNSTOWN APP CON ★
121.2 299.2
CTAF
123.6

**TOP ALTITUDE:**
**ASSIGNED BY ATC**




TAKEOFF MINIMUMS:
Rwy 12: NA - Obstacles.
Rwy 3: Standard.
Rwy 21: Standard with minimum climb of 350′ per NM to 5000.
Rwy 30: Standard with the following minimum climb requirements: Obstacle climb of 210′ per NM to 2500; ATC climb of 250′ per NM to 5000.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb direct AOO VOR, then via AOO R-026 to 2500, then climbing right turn direct AOO VOR, then via AOO R-206 to TATES INT. . . .
TAKEOFF RUNWAY 21: Climb via heading 203° and AOO R-206 to TATES INT. . . .
TAKEOFF RUNWAY 30: Climb via heading 295° to 2200, then climbing left turn heading 140° to intercept AOO R-206 to TATES INT. . . .

. . . .Cross TATES INT at or above 5000. Then via (assigned route).

TATES FOUR DEPARTURE
(TATES4.TATES) 21JUL16

ALTOONA, PENNSYLVANIA
ALTOONA-BLAIR COUNTY (AOO)

# APPENDIX 18
# PBN/EQUIPMENT REQUIREMENTS NOTE BOX

(JDUBB2.JDUBB) 00000

EASTERN WEST VIRGINIA RGNL/SHEPHERD FLD (MRB)

## JDUBB TWO DEPARTURE (RNAV)

AL-249 (FAA)

MARTINSBURG, WEST VIRGINIA

ASOS 119.925
CLNC DEL
121.8 257.65
132.075 269.075 (When Tower Closed)
GND CON
121.8 257.65
MARTINSBURG TOWER ★
124.3 (CTAF) 233.7
POTOMAC DEP CON
126.825 239.025

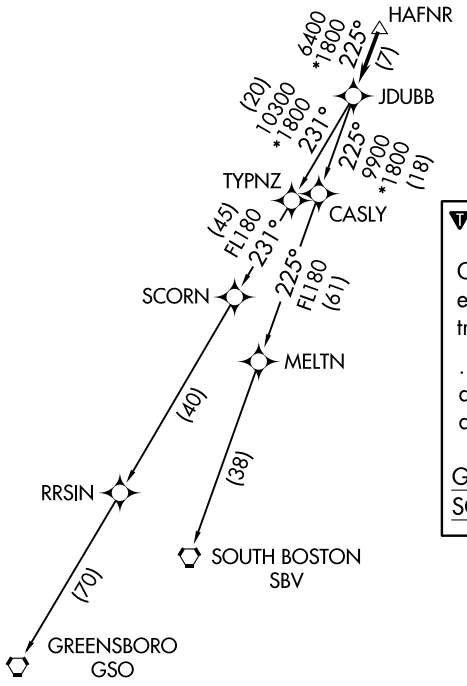
RNAV 1 - DME/DME/IRU or GPS

RADAR required

**TOP ALTITUDE: 3000**

TAKEOFF MINIMUMS
Rwy 8: Standard.
Rwy 26: Standard with a minimum climb of 225′ per NM to 2100.

NOTE: Takeoff Rwy 8: If issued an ATC heading that requires a westbound turn, climb heading 081° to 1200 prior to turning for obstacle avoidance.
NOTE: Takeoff Rwy 26: If issued an ATC heading that requires a right turn, climb heading 261° to 2400 prior to turning for obstacle avoidance.




DEPARTURE ROUTE DESCRIPTION

Climb on heading assigned by ATC, expect RADAR vectors to HAFNR, then on track 225° to JDUBB, thence. . . .

. . . . on assigned transition, maintain altitude assigned by ATC, expect clearance to filed altitude within ten (10) minutes after departure.

GREENSBORO TRANSITION (JDUBB2.GSO)
SOUTH BOSTON TRANSITION (JDUBB2.SBV)

NOTE: Chart not to scale.

JDUBB TWO DEPARTURE (RNAV)

MARTINSBURG, WEST VIRGINIA

(JDUBB2.JDUBB) 00XXX00

EASTERN WEST VIRGINIA RGNL/SHEPHERD FLD (MRB)

# APPENDIX 19
# DP WITH OFFSET TEXT BOX

(DIDLY4.DIDLY) 16091

## DIDLY FOUR DEPARTURE

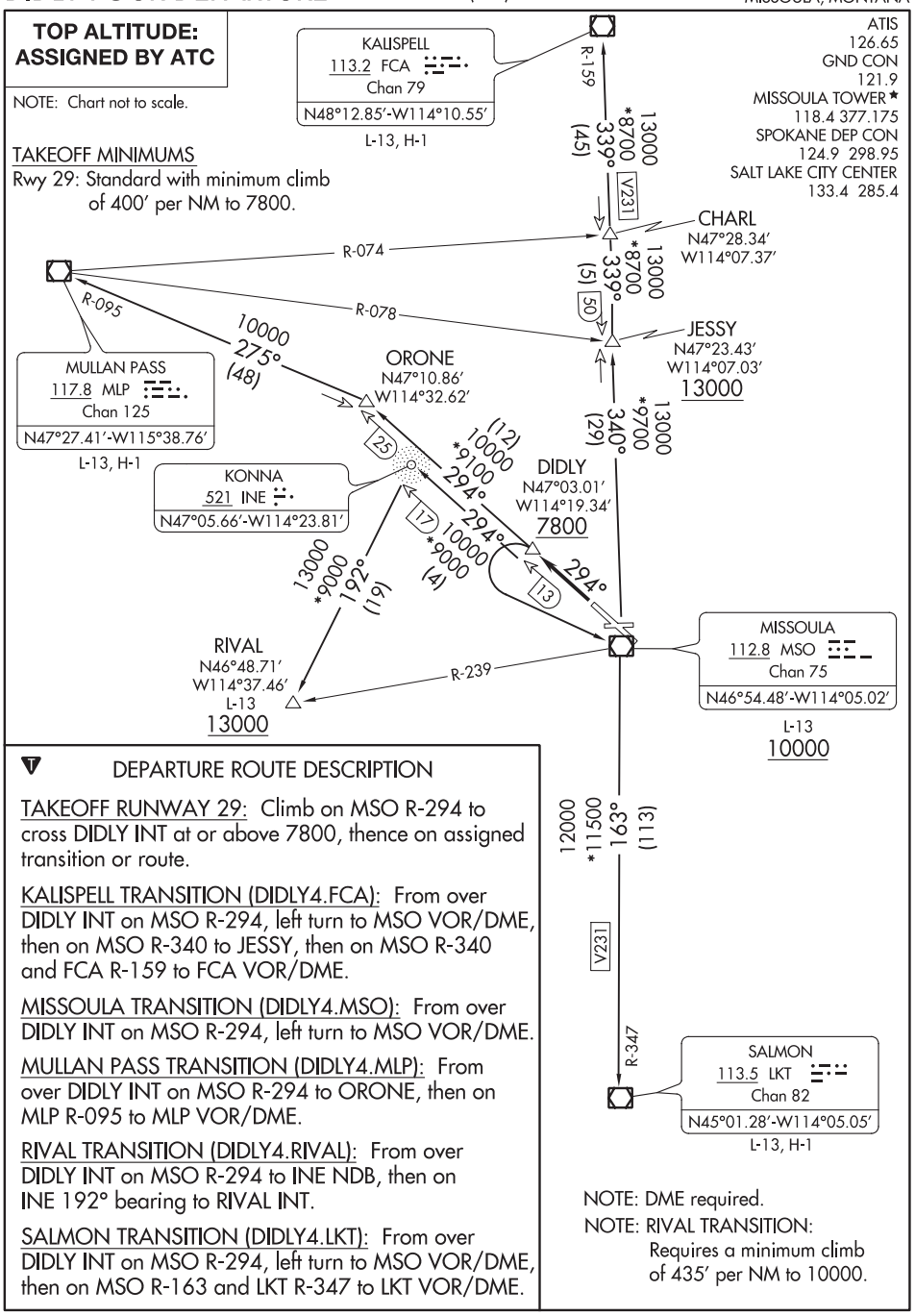
AL-266 (FAA)

MISSOULA INTL (MSO)
MISSOULA, MONTANA

**TOP ALTITUDE: ASSIGNED BY ATC**

NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwy 29: Standard with minimum climb of 400′ per NM to 7800.




### DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 29: Climb on MSO R-294 to cross DIDLY INT at or above 7800, thence on assigned transition or route.

KALISPELL TRANSITION (DIDLY4.FCA): From over DIDLY INT on MSO R-294, left turn to MSO VOR/DME, then on MSO R-340 to JESSY, then on MSO R-340 and FCA R-159 to FCA VOR/DME.

MISSOULA TRANSITION (DIDLY4.MSO): From over DIDLY INT on MSO R-294, left turn to MSO VOR/DME.

MULLAN PASS TRANSITION (DIDLY4.MLP): From over DIDLY INT on MSO R-294 to ORONE, then on MLP R-095 to MLP VOR/DME.

RIVAL TRANSITION (DIDLY4.RIVAL): From over DIDLY INT on MSO R-294 to INE NDB, then on INE 192° bearing to RIVAL INT.

SALMON TRANSITION (DIDLY4.LKT): From over DIDLY INT on MSO R-294, left turn to MSO VOR/DME, then on MSO R-163 and LKT R-347 to LKT VOR/DME.

NOTE: DME required.

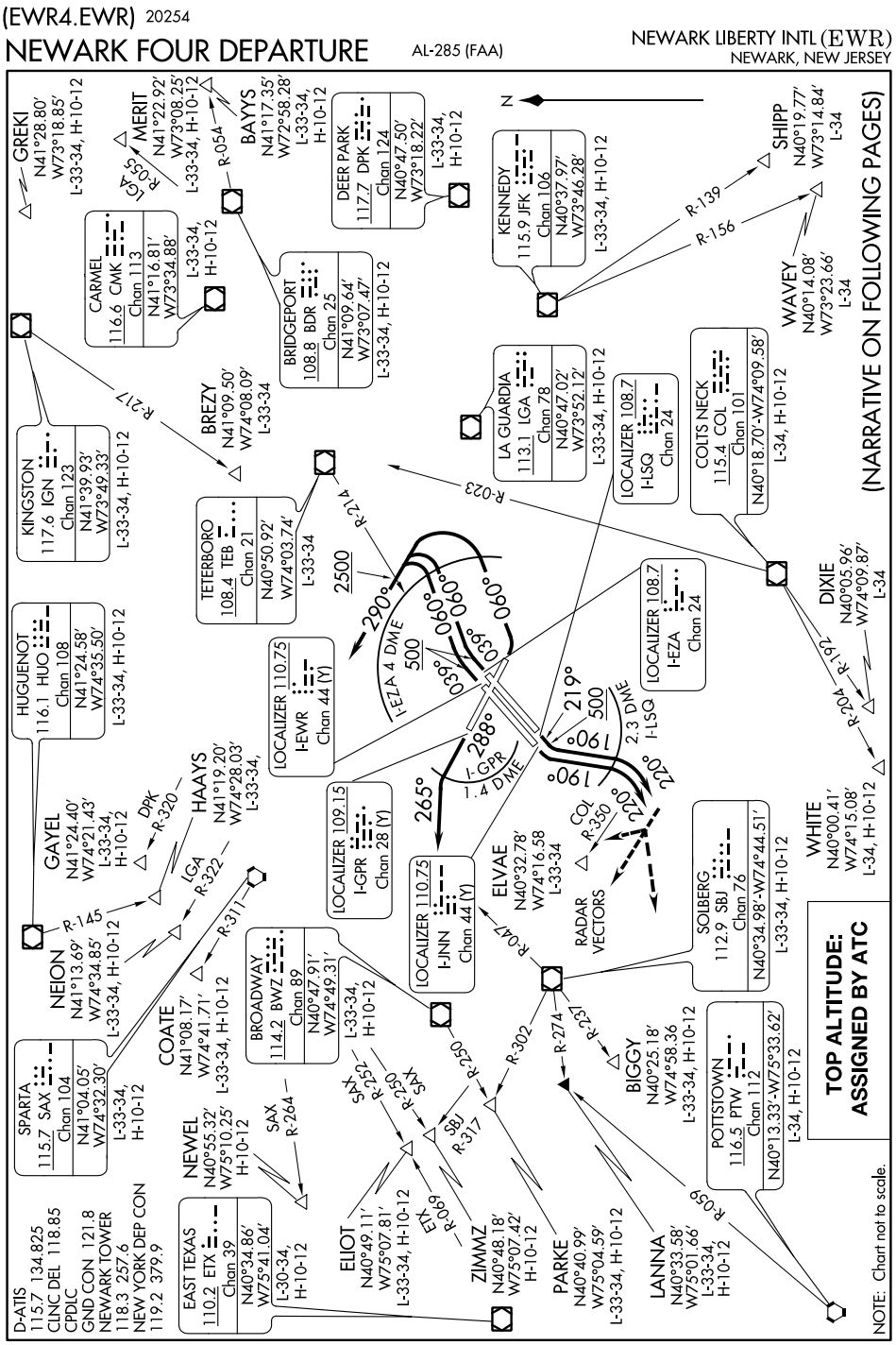
NOTE: RIVAL TRANSITION:
Requires a minimum climb of 435′ per NM to 10000.

## DIDLY FOUR DEPARTURE

(DIDLY4.DIDLY) 31MAR16

MISSOULA, MONTANA
MISSOULA INTL (MSO)

# APPENDIX 20
# THREE-PAGE DP



# APPENDIX 20
# THREE-PAGE DP (CONTINUED)

(EWR4.EWR) 19115

NEWARK LIBERTY INTL (EWR)
NEWARK, NEW JERSEY

## NEWARK FOUR DEPARTURE

AL-285 (FAA)

### DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4L/R: Climb heading 039° to 500, then climbing right turn heading 060° to I-EZA 4 DME (use I-EWR 3.6 DME when I-EZA is NA), then climbing left turn heading 290°. Cross TEB R-214 westbound at or above 2500, climb and maintain 3000, thence....

TAKEOFF RUNWAY 11: Climbing left turn heading 060° (do not proceed east of COL R-023) to I-EZA 4 DME (use I-EWR 3.6 DME when I-EZA is NA), then climbing left turn heading 290°. Cross TEB R-214 westbound at or above 2500, climb and maintain 3000, thence....

TAKEOFF RUNWAY 22L: Climb heading 219° to 500, then climbing left turn heading 190° to I-LSQ 2.3 DME (use I-JNN 2.8 DME when I-LSQ is NA), then climbing right turn heading 220°. Maintain 2500, thence....

TAKEOFF RUNWAY 22R: Climbing left turn heading 190° to I-LSQ 2.3 DME (use I-JNN 2.8 DME when I-LSQ is NA), then climbing right turn heading 220°. Maintain 2500, thence....

TAKEOFF RUNWAY 29: Climb heading 288° to I-GPR 1.4 DME, then climbing left turn heading 265°. Maintain 5000, thence....

....as per notes or on vector to assigned route/fix. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

LOST COMMUNICATIONS: For aircraft proceeding to COATE, NEION, HAAYS, GAYEL, or BREZY, if radio contact lost/not established with ATC, climb to 3000′ after SBJ R-047.

NOTE: Takeoff Rwy 11 obstruction, 1806′ high building 6.6 miles east of DER.
NOTE: Radar and DME Required.
NOTE: Rwy 4L/R, 11 simultaneous reception of EWR ILS/DME required.
NOTE: Rwy 22L/R westbound departures expect vectors between 5 and 8 NM.

| DP FIX | Depart Rwy 4L/R Expect VECTORS to: | Depart Rwy 22L/R Expect VECTORS to: |
|---|---|---|
| BAYYS | BDR/BDR R-054 | BDR/BDR R-054 |
| BIGGY | **SBJ** /SBJ R-237 | **SBJ**/SBJ R-237 |
| BREZY | IGN R-217 to BREZY | IGN R-217 to BREZY |
| COATE | SAX/SAX R-311 | SAX/SAX R-311 |
| DIXIE | COL R-350/COL/COL R-192 or ELVAE/COL | COL R-350/COL/COL R-192 or ELVAE/COL |
| ELIOT | SAX R-252 | ETX (2300L-0700L SBJ/ETX) |
| GAYEL | DPK R-320 | DPK R-320 |
| HAAYS | HUO | HUO |
| LANNA | PTW R-059 | **SBJ**/SBJ R-274 |
| MERIT | LGA R-055 | LGA R-055 |
| NEION | LGA R-322 | LGA R-322 |
| NEWEL | SAX/SAX R-264 | SAX/SAX R-264 |
| PARKE | BWZ R-250 | **SBJ** /SBJ R-302 |
| SHIPP | JFK/JFK R-139 | JFK/JFK R-139 |
| WAVEY | JFK/JFK R-156 | JFK/JFK R-156 |
| WHITE | COL R-350/COL/COL R-204 or ELVAE/COL | COL R-350/COL/COL R-204 or ELVAE/COL |
| ZIMMZ | SAX R-250 | SBJ /SBJ R-317 |

NOTE: ELIOT may be accessed by all types of aircraft requesting a final altitude of 14000 or 16000.
NOTE: NEWEL may be accessed by turbojet aircraft only requesting a final altitude at or above FL180.
NOTE: ZIMMZ may be accessed by all types of aircraft requesting a final altitude at or above FL180.

(CONTINUED ON FOLLOWING PAGE)

NEWARK FOUR DEPARTURE
NEWARK, NEW JERSEY
NEWARK LIBERTY INTL (EWR)
(EWR4.EWR) 25APR19

# APPENDIX 20
# THREE-PAGE DP (CONTINUED)

(EWR4.EWR) 19115

NEWARK LIBERTY INTL (EWR)

## NEWARK FOUR DEPARTURE

AL-285 (FAA)

NEWARK, NEW JERSEY

(NOTES CONTINUED)

TAKEOFF MINIMUMS:

Rwy 4L/R: Standard. ATC climb of 500′ per NM to 2500.
Rwy 11: Standard with minimum climb of 361′ per NM to 2500.
Rwy 22L: Standard with minimum climb of 453′ per NM to 500.
Rwy 22R: Standard with minimum climb of 459′ per NM to 400.
Rwy 29: Standard with minimum climb of 473′ per NM to 500.

NEWARK FOUR DEPARTURE

NEWARK, NEW JERSEY

(EWR4.EWR) 25APR19

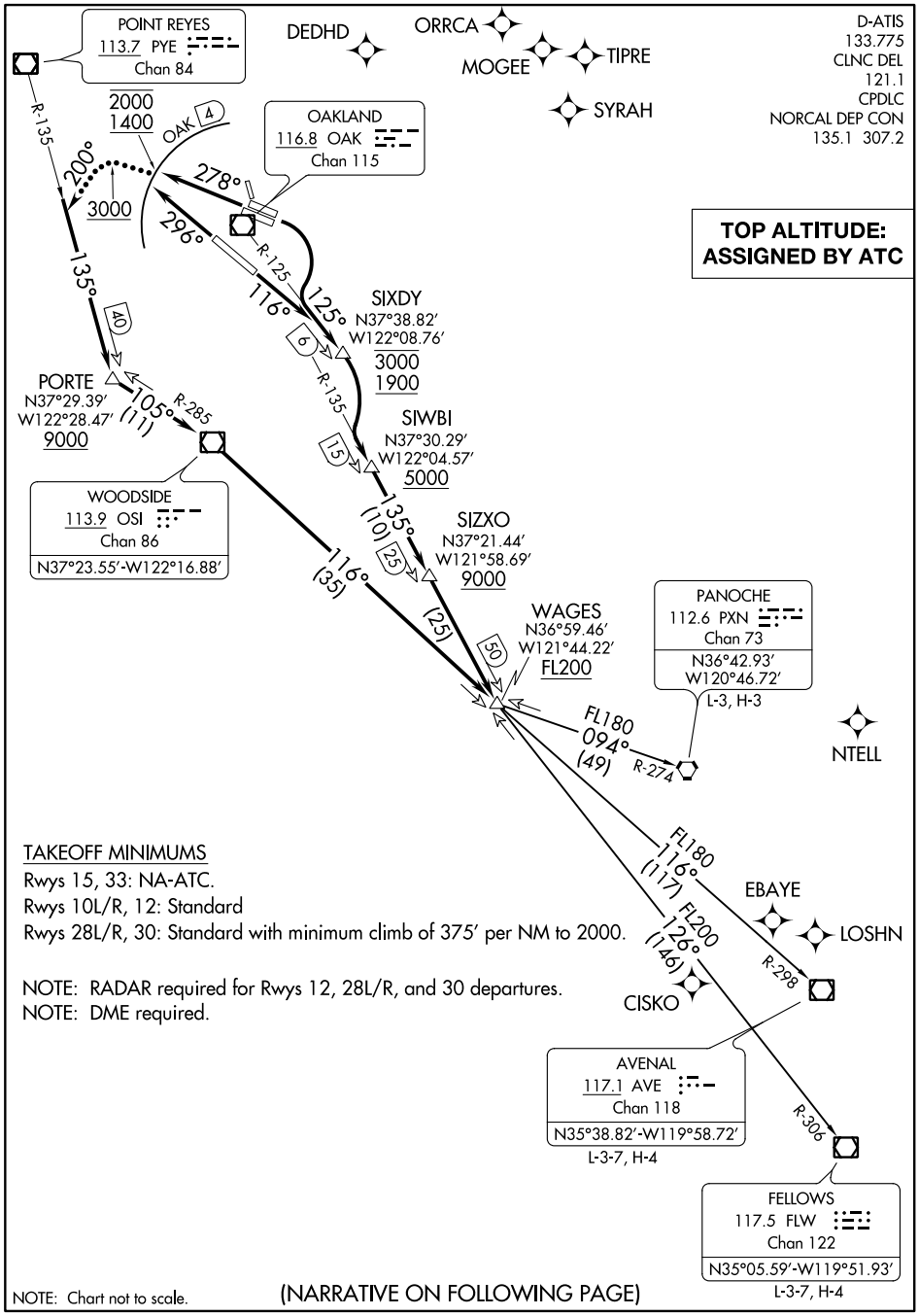
NEWARK LIBERTY INTL (EWR)

# APPENDIX 21
# CONVENTIONAL DP WITH RNAV WAYPOINTS

(SKYL1.WAGES) 19227

## SKYLINE ONE DEPARTURE

METRO OAKLAND INTL (OAK)
OAKLAND, CALIFORNIA




TAKEOFF MINIMUMS
Rwys 15, 33: NA-ATC.
Rwys 10L/R, 12: Standard
Rwys 28L/R, 30: Standard with minimum climb of 375′ per NM to 2000.

NOTE: RADAR required for Rwys 12, 28L/R, and 30 departures.
NOTE: DME required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

SKYLINE ONE DEPARTURE
(SKYL1.WAGES) 15AUG19

OAKLAND, CALIFORNIA
METRO OAKLAND INTL (OAK)

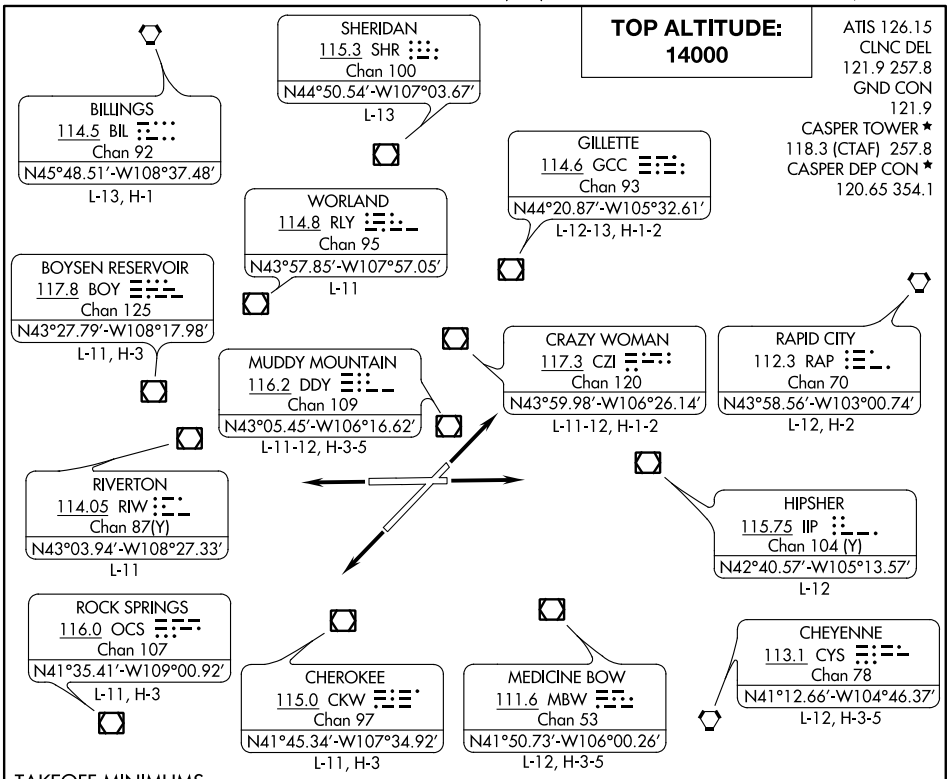
# APPENDIX 22
# DP ROUTE WITH RANGE OF BEARINGS

(CPR3.CPR) 21056

## CASPER THREE DEPARTURE

AL-72 (FAA)

CASPER/NATRONA COUNTY INTL (CPR)
CASPER, WYOMING




TAKEOFF MINIMUMS
Rwys 12, 17, 30, 35, NA- Environmental.
Rwys 3, 8, 26, Standard.
Rwy 21, Standard with a minimum climb of 235 feet per NM to 6700.

NOTE: RADAR required.

NOTE: Chart not to scale.

▼ DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb on a heading between 212° CW 094° from DER as assigned by ATC thence. . . .
TAKEOFF RUNWAY 8: Climb on a heading between 257° CW 094° from DER as assigned by ATC thence. . . .
TAKEOFF RUNWAY 21: Climb on a heading between 195° CW 032° from DER as assigned by ATC thence. . . .
TAKEOFF RUNWAY 26: Climb on a heading between 190° CW 077° from DER as assigned by ATC thence. . . .

. . . .Maintain 14000′ or assigned lower altitude. Expect RADAR vectors to filed/assigned fix/route. Expect further clearance to filed altitude ten minutes after departure.

LOST COMMUNICATIONS
If no transmissions are received for one minute after departure, maintain assigned heading until 7,000 feet, then climb to filed altitude via direct DDY VOR/DME, then via assigned route. Runways 3 and 8 turn left to DDY VOR/DME, runways 21 and 26 turn right to DDY VOR/DME.

CASPER THREE DEPARTURE

CASPER, WYOMING
CASPER/NATRONA COUNTY INTL (CPR)

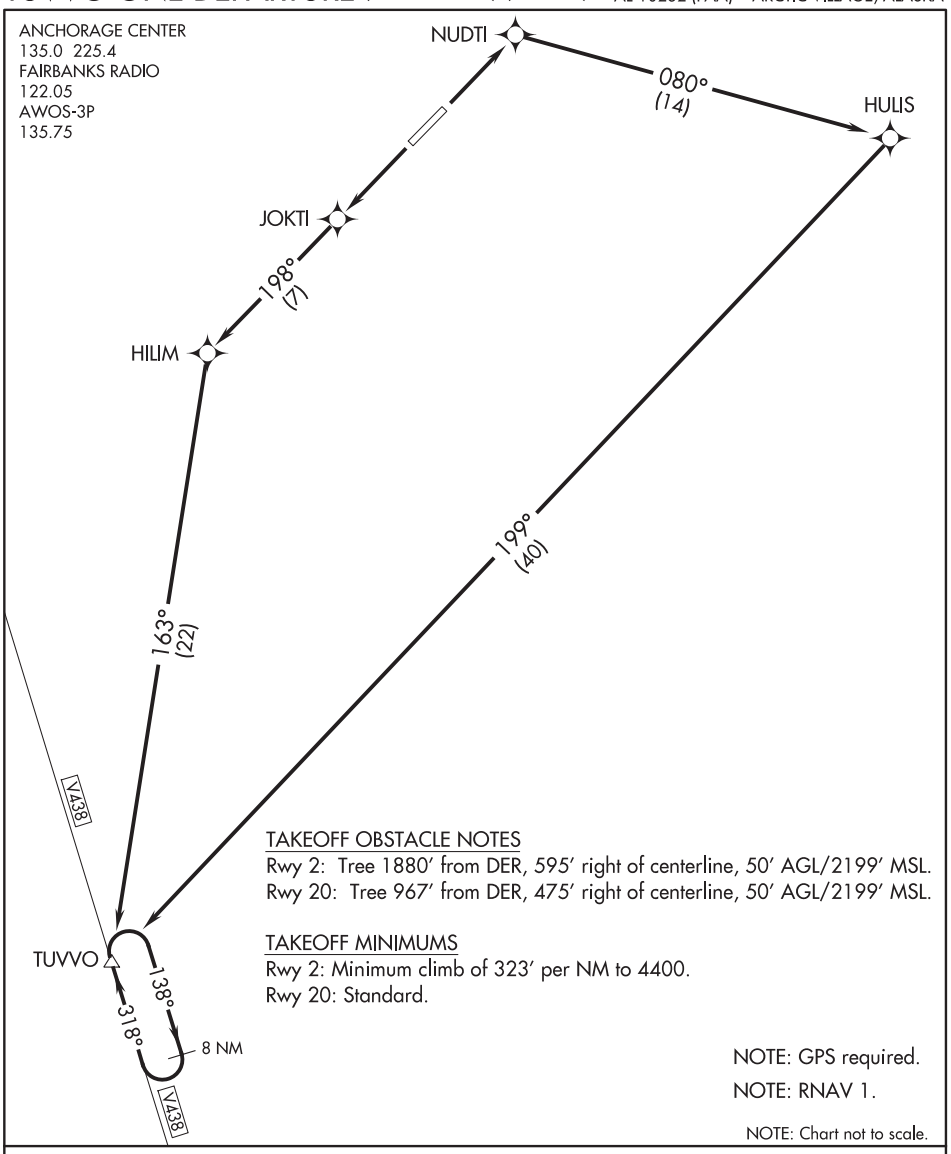
(CPR3.CPR) 21JUL16

# APPENDIX 23
# RNAV DP WITH DEPARTURE ROUTING ONLY

(TUVVO1.TUVVO) 17005

## TUVVO ONE DEPARTURE (OBSTACLE) (RNAV)

ARCTIC VILLAGE (ARC)(PARC)
AL-10232 (FAA) ARCTIC VILLAGE, ALASKA




TAKEOFF OBSTACLE NOTES
Rwy 2: Tree 1880′ from DER, 595′ right of centerline, 50′ AGL/2199′ MSL.
Rwy 20: Tree 967′ from DER, 475′ right of centerline, 50′ AGL/2199′ MSL.

TAKEOFF MINIMUMS
Rwy 2: Minimum climb of 323′ per NM to 4400.
Rwy 20: Standard.

NOTE: GPS required.
NOTE: RNAV 1.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 2: Climb to 10000 direct NUDTI, and via 080° track to HULIS, and right turn via 199° track to TUVVO, thence. . . .

TAKEOFF RUNWAY 20: Climb to 10000 direct JOKTI, then via depicted route to TUVVO, thence. . . .

. . . . climb in holding (if required) at TUVVO before proceeding via assigned route and altitude.

TUVVO ONE DEPARTURE (OBSTACLE) (RNAV)
(TUVVO1.TUVVO) 16FEB06

ARCTIC VILLAGE, ALASKA
ARCTIC VILLAGE (ARC)(PARC)

# APPENDIX 24
# RNAV DP WITH DEPARTURE AND TRANSITION ROUTING

(CSHEL5.CSHEL) 15232

## CSHEL FIVE DEPARTURE (RNAV) AL-6757 (FAA)

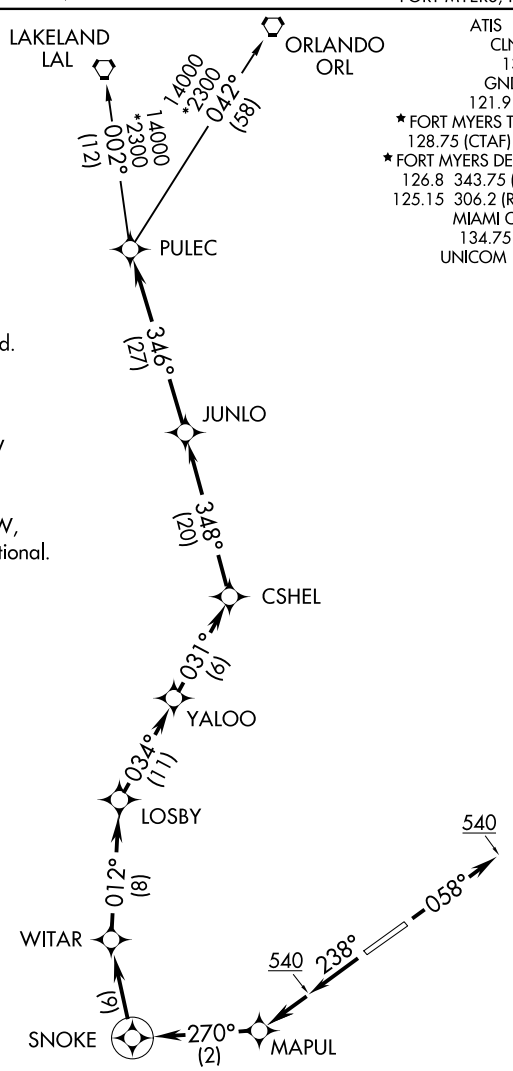
SOUTHWEST FLORIDA INTL (RSW)
FORT MYERS, FLORIDA

**TOP ALTITUDE: 4000**

ATIS 124.65
CLNC DEL 132.075
GND CON 121.9 348.6
★ FORT MYERS TOWER 128.75 (CTAF) 257.8
★ FORT MYERS DEP CON 126.8 343.75 (Rwy 6) 125.15 306.2 (Rwy 24)
MIAMI CENTER 134.75 322.5
UNICOM 122.95

TAKEOFF MINIMUMS
Rwy 6, 24: Standard with ATC climb of 500′ per NM to 540.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: For Turbojet aircraft only.
NOTE: Takeoff Rwy 24 - For non-GPS equipped aircraft LBV and RSW DME's must be operational.
NOTE: Takeoff Rwy 6 - For non-GPS equipped aircraft LAL, LBV, RSW, and SRQ DME's must be operational.




NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

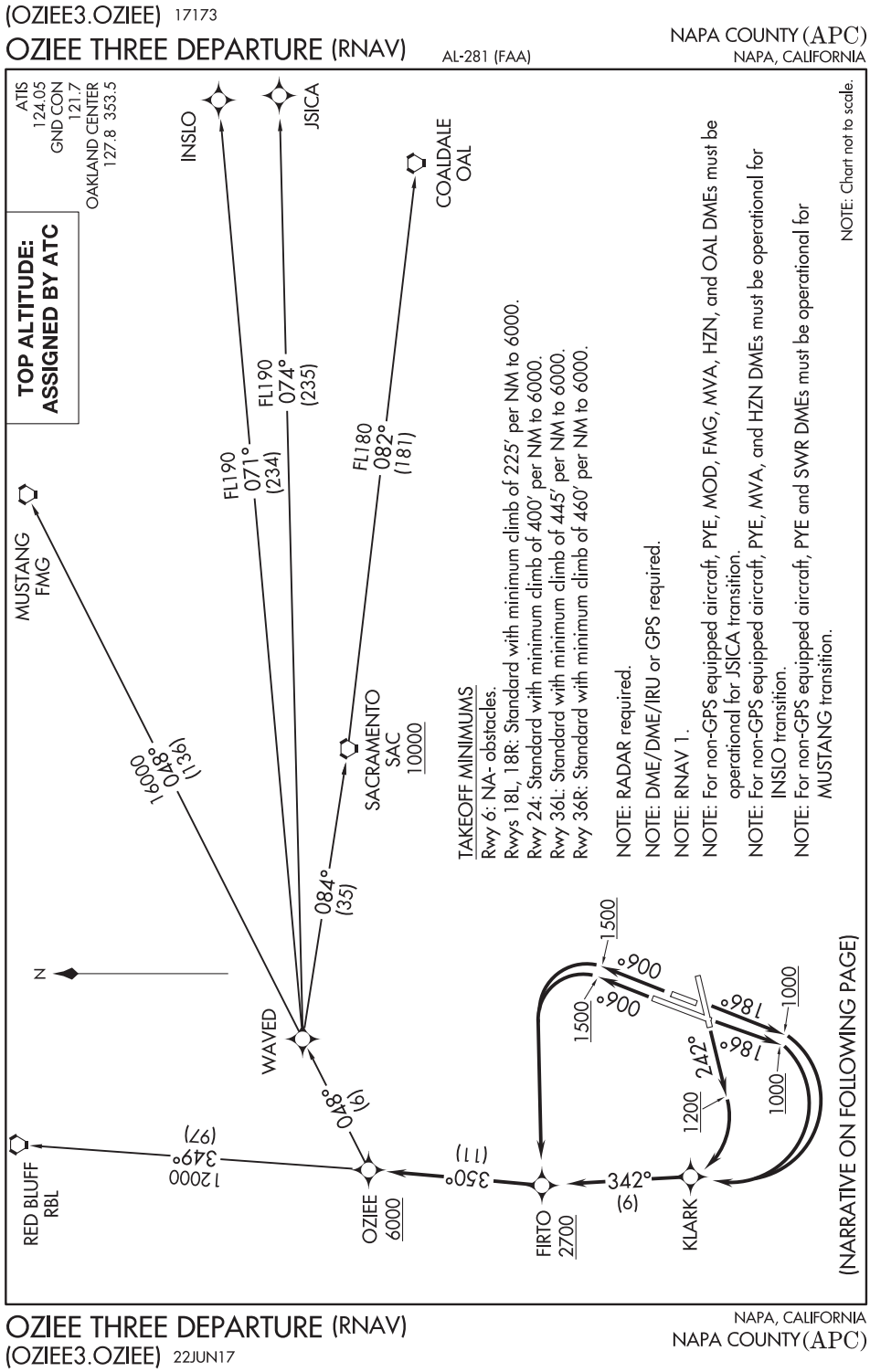
TAKEOFF RUNWAY 6: Climb heading 058° or as assigned by ATC, to 540. Expect vectors to CSHEL, then via depicted route to PULEC, thence....
TAKEOFF RUNWAY 24: Climb heading 238° to 540, then direct MAPUL, then climb via 270° track to SNOKE, then right turn direct WITAR, then via depicted route to PULEC, thence....

....via (transition). Maintain 4000 or as assigned by ATC, expect filed altitude/flight level 10 minutes after departure.

LAKELAND TRANSITION (CSHEL5.LAL)
ORLANDO TRANSITION (CSHEL5.ORL)

CSHEL FIVE DEPARTURE (RNAV)
(CSHEL5.CSHEL) 15232
FORT MYERS, FLORIDA
SOUTHWEST FLORIDA INTL (RSW)

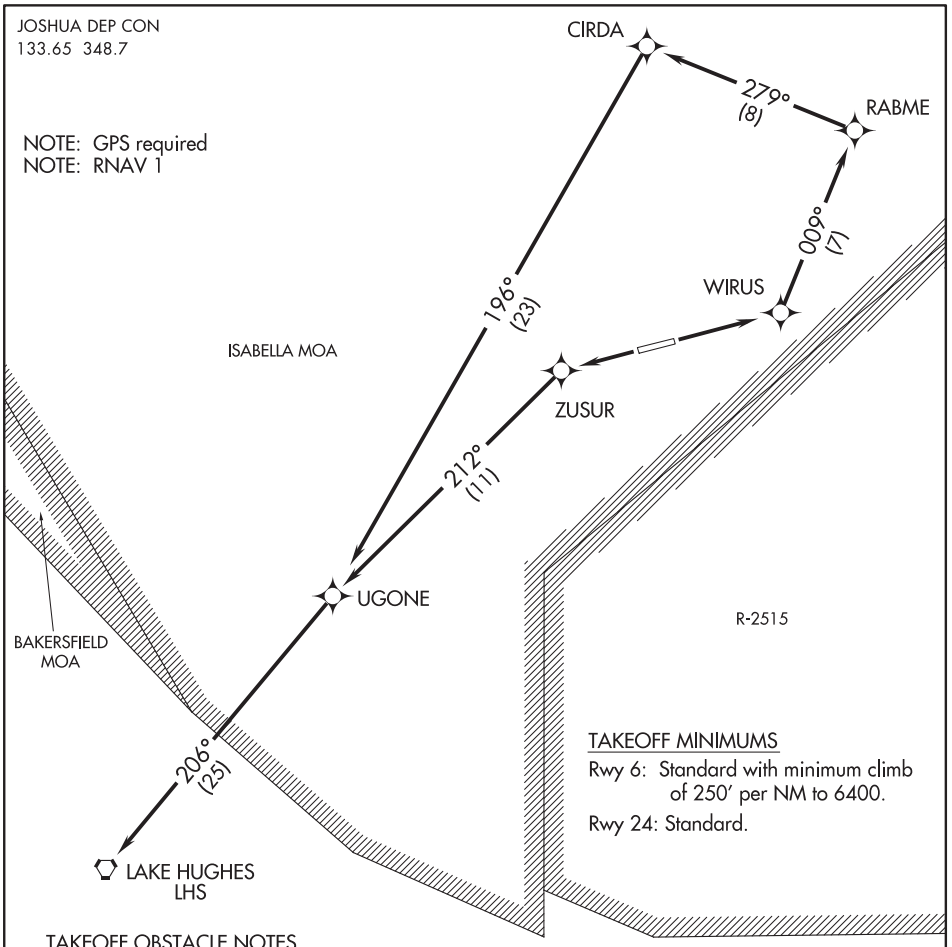
# APPENDIX 25
# RNAV DP WITH EAST-WEST ORIENTATION



# APPENDIX 26
# OBSTACLE RNAV DP

(L711.LHS) 16091 AL-9440 (FAA) CALIFORNIA CITY MUNI (L71)

## CALIFORNIA CITY ONE DEPARTURE (OBSTACLE) (RNAV) CALIFORNIA CITY, CALIFORNIA




TAKEOFF MINIMUMS

Rwy 6: Standard with minimum climb of 250′ per NM to 6400.

Rwy 24: Standard.

TAKEOFF OBSTACLE NOTES

Rwy 6: Ground 37′ from DER, 408′ right of centerline, 0′ AGL/2406′ MSL.

Rwy 24: Windsock 8′ from DER, 159′ right of centerline, 25′ AGL/2476′ MSL.
Bush 220′ from DER, 456′ left of centerline, 9′ AGL/2467′ MSL.
Bush 550′ from DER, 447′ left of centerline, 16′ AGL/2474′ MSL.
Bush 365′ from DER, 299′ left of centerline, 8′ AGL/2469′ MSL.
Bush 245′ from DER, 449′ left of centerline, 8′ AGL/2466′ MSL.
Bush 422′ from DER, 454′ left of centerline, 12′ AGL/2470′ MSL.
Bush 355′ from DER, 106′ left of centerline, 6′ AGL/2467′ MSL.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb direct WIRUS, then via depicted route to LHS VORTAC. Maintain 9000.

TAKEOFF RUNWAY 24: Climb direct ZUSUR, then via depicted route to LHS VORTAC. Maintain 9000.

CALIFORNIA CITY ONE DEPARTURE (OBSTACLE) (RNAV) CALIFORNIA CITY, CALIFORNIA

(L711.LHS) 17MAR05 CALIFORNIA CITY MUNI (L71)

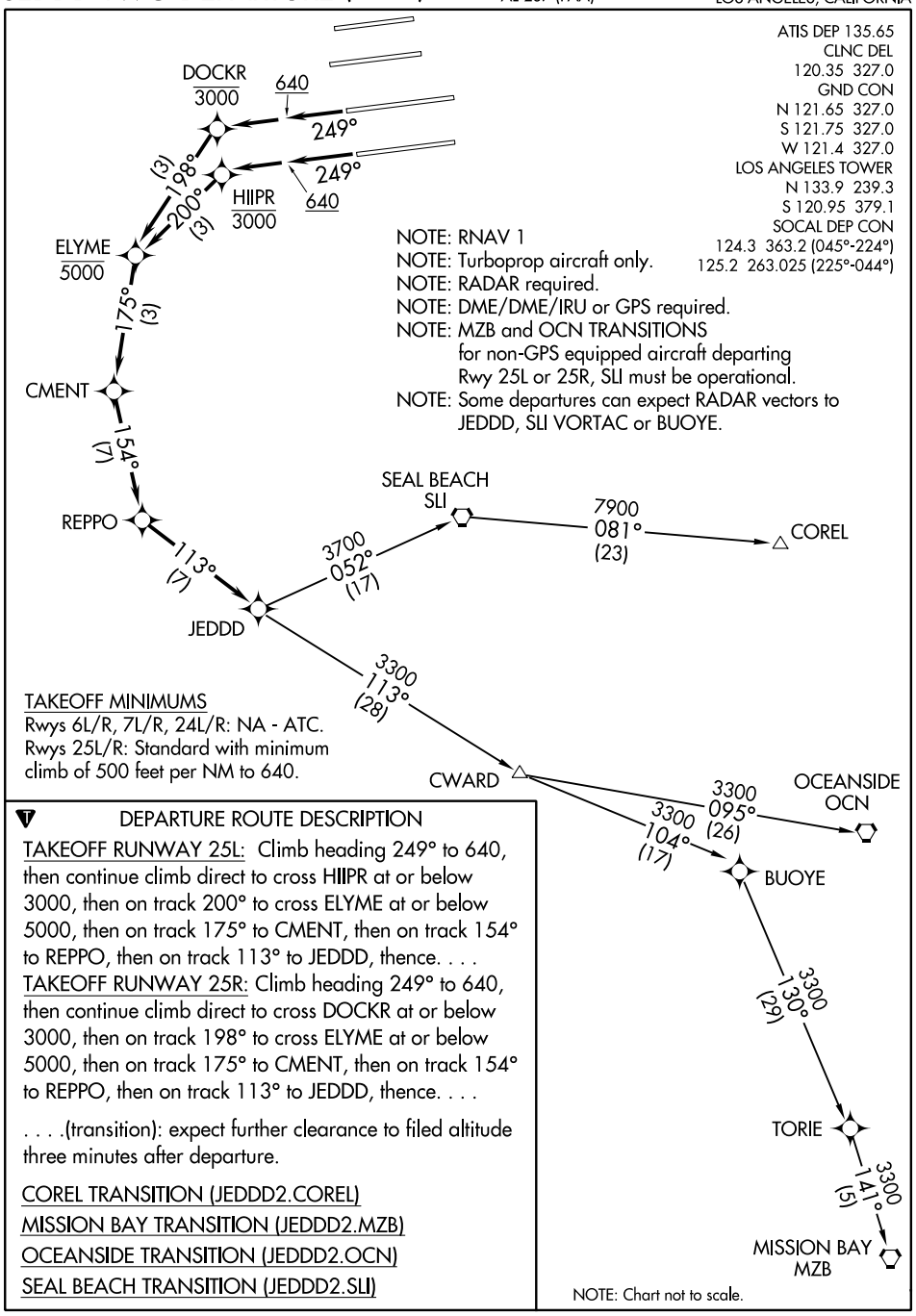
# APPENDIX 27
# RNAV DP WITH OFFSET TEXT BOX

(JEDDD2.JEDDD) 14317

## JEDDD TWO DEPARTURE (RNAV)

AL-237 (FAA)

LOS ANGELES INTL (LAX)
LOS ANGELES, CALIFORNIA

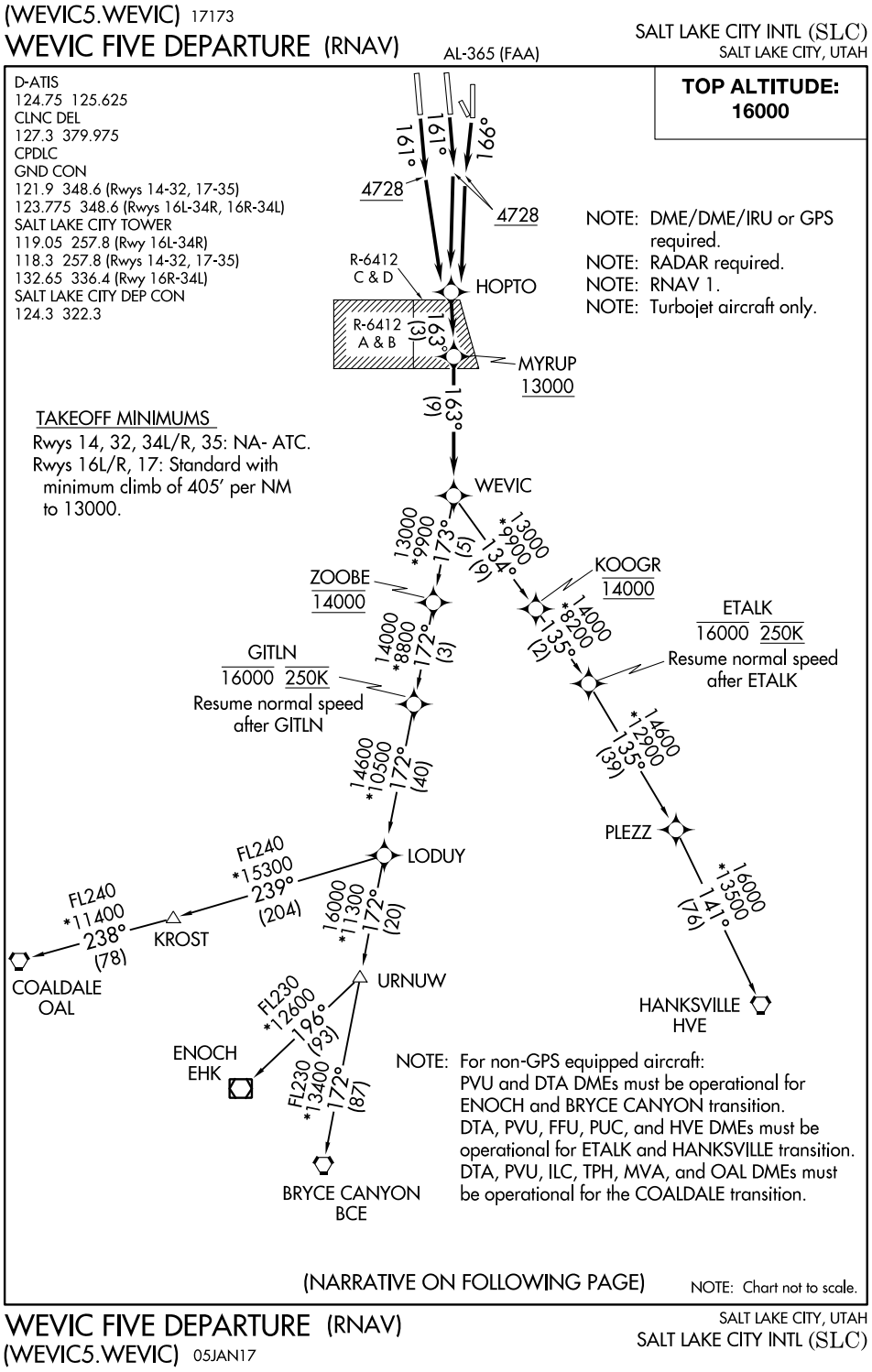



## JEDDD TWO DEPARTURE (RNAV)

(JEDDD2.JEDDD) 13NOV14

LOS ANGELES, CALIFORNIA
LOS ANGELES INTL (LAX)

# APPENDIX 28
# RNAV DP WITH CONTINUED PAGE



# APPENDIX 28
# RNAV DP WITH CONTINUED PAGE (CONTINUED)

(WEVIC5.WEVIC) 17173

WEVIC FIVE DEPARTURE (RNAV) AL-365 (FAA)

SALT LAKE CITY INTL (SLC)
SALT LAKE CITY, UTAH

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16R: Climb heading 161° to 4728, then left turn direct HOPTO, then on depicted route to WEVIC, thence. . . .
TAKEOFF RUNWAY 16L: Climb heading 161° to 4728, then right turn direct HOPTO, then on depicted route to WEVIC, thence. . . .
TAKEOFF RUNWAY 17: Climb heading 166° to 4728, then left turn direct HOPTO, then on depicted route to WEVIC, thence. . . .

. . . .(transition) maintain 16000 or lower filed altitude. Expect filed altitude 10 minutes after departure.

LOST COMMUNICATIONS: Continue on SID, comply with published altitude restrictions.

BRYCE CANYON TRANSITION (WEVIC5.BCE)
COALDALE TRANSITION (WEVIC5.OAL)
ETALK TRANSITION (WEVIC5.ETALK)
HANKSVILLE TRANSITION (WEVIC5.HVE)
ENOCH TRANSITION (WEVIC5.EHK)

WEVIC FIVE DEPARTURE (RNAV)
(WEVIC5.WEVIC) 05JAN17

SALT LAKE CITY, UTAH
SALT LAKE CITY INTL (SLC)

# APPENDIX 29
# RNAV DEPARTURE ATTENTION ALL USERS PAGE (AAUP)

17173 HARTSFIELD-JACKSON ATLANTA INTL (ATL)

RNAV DEPARTURE AAUP AL-26 (FAA) ATLANTA, GEORGIA

## ATTENTION ALL USERS PAGE (AAUP)

1. **PREFLIGHT:** All aircraft capable of conducting terminal RNAV procedures should expect an RNAV SID clearance. If unable to accept the RNAV SID clearance, notify Clearance Delivery. Upon receipt of your Air Traffic Control (ATC) clearance, crosscheck the assigned RNAV SID, Departure Runway, and En Route Transition, as loaded into and depicted by your navigation system, against your clearance. Ensure that the sequence of waypoints loaded in the FMS match the waypoints on the appropriate chart(s). Do not modify or manually construct RNAV procedures. Ensure all transitions are loaded correctly.

2. **BEFORE TAKEOFF:** Ensure that the Departure Runway assigned on taxi, RNAV SID, and En Route Transition are depicted by your navigation system. Pay particular attention if you have received a runway change or a revised ATC clearance. Pilots of aircraft equipped with electronic navigation map displays, must verify that the aircraft symbol relative to the runway symbol and lateral track, and depicted route, agrees with your clearance. You should ensure the waypoints sequence depicted by your navigation system matches the route depicted on the appropriate chart(s) and the altitude set in the altitude window matches the TOP ALTITUDE of the SID, unless amended by ATC. For navigation systems with ROUTE and LEGS pages, the LEGS page should be used to verify routing. If unable to comply with the RNAV SID, contact ATC prior to takeoff and request an amended clearance.

3. **LINE UP/TAKEOFF:** Pilots can expect a takeoff clearance from ATC that will provide instructions to depart the runway either via an RNAV path or via an assigned heading. If assigned a heading instead of an RNAV path, ATC must also issue an altitude to maintain. An RNAV path takeoff clearance will direct aircraft to fly the required RNAV path to the initial waypoint on the SID in the ATC clearance. A typical takeoff clearance will state, for example, "Delta 123, RNAV to MPASS, Runway 26L, Cleared for Takeoff". After verifying that the correct runway and departure are loaded and that the correct lateral navigation mode is available and ready for use after takeoff, the expected pilot response is, "Delta 123, RNAV to MPASS, Runway 26L, Cleared for Takeoff". If the takeoff clearance does not match the planned/loaded procedure, either request an initial heading from tower or refuse the takeoff clearance until the discrepancy is resolved.

4. **AFTER TAKEOFF:** Unless instructed to fly a heading by ATC, engage lateral navigation flight guidance as soon as practical and fly the departure precisely. Strict compliance with the lateral and vertical tracks and charted speed restrictions is imperative. Parallel RNAV departures must not encroach on the airspace between parallel runway centerlines without specific ATC clearance. Manually intervene if necessary to stay on track to avoid transgressing in the direction of a parallel track. If unable to comply with the SID profile, immediately notify ATC.

5. **SPECIFIC INFORMATION:** Atlanta will utilize RNAV departures in both dual and triple runway operations between 0700 - 2300 local. All properly equipped aircraft should expect to fly an ATLANTA RNAV DEPARTURE. Headings may be issued in lieu of an RNAV off the ground take off clearance. If so, an altitude to maintain must also be issued. Pilots may anticipate a runway assignment based upon the information provided below, however actual runway assignments will be issued on initial contact with Ground Control.

(CONTINUED ON FOLLOWING PAGE)

RNAV DEPARTURE AAUP 33°38'N-84°26'W ATLANTA, GEORGIA

10NOV16 HARTSFIELD-JACKSON ATLANTA INTL (ATL)

# APPENDIX 29
# RNAV DEPARTURE ATTENTION ALL USERS PAGE (AAUP) (CONTINUED)

17173 HARTSFIELD-JACKSON ATLANTA INTL (ATL)

RNAV DEPARTURE AAUP AL-26 (FAA) ATLANTA, GEORGIA

**ATTENTION ALL USERS PAGE (AAUP)**

CONTINUED FROM PREVIOUS PAGE

**Atlanta RNAV SIDs Directions:**

| North | West | South | East |
|---|---|---|---|
| PADGT | CUTTN (WEST 2) | BANNG | GAIRY |
| PENCL | KAJIN (WEST 1) | HAALO | JACCC |
| SMKEY | NASSA (WEST 2) | SMLTZ | PHIIL |
| VARNM | POUNC (WEST 1) | VRSTY | PLMMR |

**Expected Runway Assignment for Dual or Triple Departure Operations**

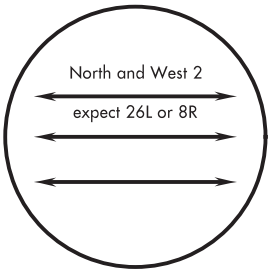
**Dual Departures**

**Triple Departures**

Triples West Flow:

South and West 1 Departures expect Runway 27R

East Departures expect Runway 28




Triples East Flow:

East Departures expect Runway 9L

South and West 1 Departures expect Runway 10

RNAV DEPARTURE AAUP 33°38′N-84°26′W ATLANTA, GEORGIA

10NOV16 HARTSFIELD-JACKSON ATLANTA INTL (ATL)

# APPENDIX 30
# COPTER DP WITH VISUAL FLIGHT PATH SEGMENT

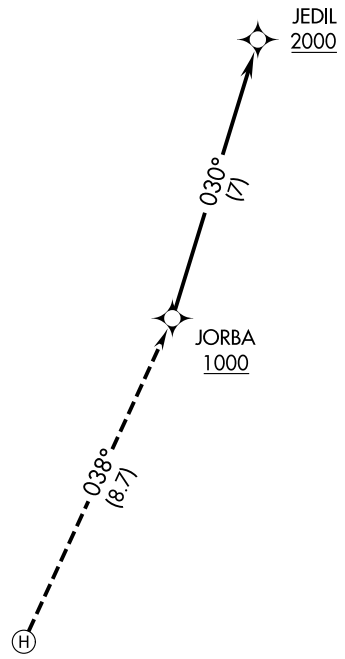
(JEDIL1.JEDIL) 00000 AL-10972 (FAA)

## JEDIL ONE DEPARTURE (COPTER) (RNAV)

WEST 30TH STREET (KJRA)
NEW YORK, NEW YORK

LA GUARDIA APP CON
126.05
NEWARK APP CON
127.85
TETERBORO ATIS
114.2 132.85

TOP ALTITUDE:
2000




NOTE: GPS required.
NOTE: Use Teterboro altimeter setting.
NOTE: RNAV 1

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

VISUAL SEGMENT: Hover at 15′ AGL, then takeoff heading 038° to intercept course 038, climbing to cross JORBA at or above 1000.
IFR SEGMENT: From JORBA via track 030° to cross JEDIL at or above 2000.

JEDIL ONE DEPARTURE (COPTER) (RNAV)
(JEDIL1.JEDIL) 00XXX00

NEW YORK, NEW YORK
WEST 30TH STREET (KJRA)

# APPENDIX 31
# COPTER DP WITH VFR SEGMENT

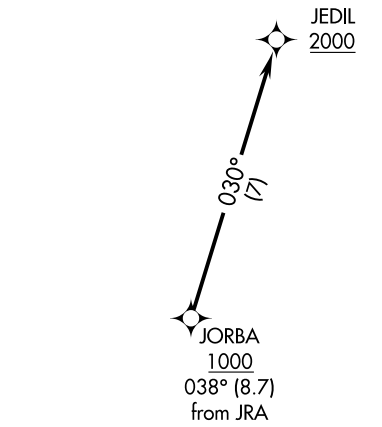
(JEDIL1.JEDIL) 00000 AL-10972 (FAA)

## JEDIL ONE DEPARTURE (COPTER) (RNAV)

WEST 30TH STREET (KJRA)
NEW YORK, NEW YORK

LA GUARDIA APP CON
126.05
NEWARK APP CON
127.85
TETERBORO ATIS
114.2 132.85

TOP ALTITUDE:
2000




NOTE: GPS required.
NOTE: Use Teterboro altimeter setting.
NOTE: RNAV 1

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

VFR SEGMENT: VFR climb to JORBA, cross JORBA at or above 1000.
IFR SEGMENT: From JORBA via track 030° to cross JEDIL at or above 2000.

JEDIL ONE DEPARTURE (COPTER) (RNAV)
(JEDIL1.JEDIL) 00XXX00

NEW YORK, NEW YORK
WEST 30TH STREET (KJRA)