

**U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION**  
**GRAPHIC DEPARTURE PROCEDURE (DP)**

**NFDD 166**  
**agy**

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. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BETTE	FOUR	BETTE4.BETTE	THREE	09 JUN 01	10/15/15

**TYPE:** SID

**DP ROUTE DESCRIPTION:**

**TAKEOFF RWY 4L/R:** CLIMBING RIGHT TURN HEADING 100.00, THENCE...

**TAKEOFF RWY 13L/R:** CLIMB ON ASSIGNED HEADING, THENCE...

**TAKEOFF RWY 22L/R:** CLIMB HEADING 224.77, THENCE...

**\*GATEWAY CLIMB:** CLIMBING RIGHT TURN TO INTERCEPT THE JFK R-232 UNTIL 5.00 DME, THEN TURN LEFT HEADING 220.00, THENCE...

**TAKEOFF RWY 31L/R:**

**BREEZY POINT CLIMB:** CLIMBING LEFT TURN DIRECT CRI VOR/DME. MAKE TURN EAST OF CRI R-039 (REMAIN WITHIN JFK 4.50 DME), THEN VIA CRI R-223. CROSS CRI 3.00 DME OR JFK R-253 AT OR ABOVE 2500, THENCE...

**\*\*BRIDGE CLIMB:** CLIMBING LEFT TURN DIRECT OGY NDB, THEN ON HEADING 220.00 AFTER OGY NDB. MAKE TURN EAST OF CRI R-039 (REMAIN WITHIN JFK 4.50 DME). CROSS JFK R-253 AT OR ABOVE 2500, THENCE...

**CANARSIE CLIMB:** CLIMBING LEFT TURN DIRECT CRI VOR/DME. MAKE TURN EAST OF CRI R-039 (REMAIN WITHIN JFK 4.50 DME), THEN VIA CRI R-176. CROSS CRI 2.00 DME OR JFK R-253 AT OR ABOVE 2500, THENCE...

...VIA RADAR VECTORS TO BETTE, MAINTAIN 5000. EXPECT CLEARANCE TO FILED ALTITUDE/FLIGHT LEVEL TEN (10) MINUTES AFTER DEPARTURE.

**TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):**

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	Crossing Altitudes/Fixes

**PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS:**

**\*NOTE:** DME REQUIRED. TO BE ASSIGNED DURING THE PERIOD OF 2200-0700 LOCAL.

**\*\*NOTE:** ADF REQUIRED.

**NOTE:** RADAR REQUIRED.

**TAKEOFF MINIMUMS:**

**RWY 4L, 4R, 13L, 13R, 22L, 22R, 31L, 31R STANDARD.**

**TAKEOFF OBSTACLES NOTES:**

**NOTE: RWY 4L,** FENCE AND LT POLES BEGINNING 94 FT FROM DER, 466 FT RIGHT OF CENTERLINE, UP TO 7 FT AGL/22 FT MSL. LOCALIZER 204 FT FROM DER, ON CENTERLINE, 6 FT AGL/21 FT MSL. TOWER, LT POLES, UTILITY POLES, FENCE, AND BLDG BEGINNING 212 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 15 FT AGL/28 FT MSL. TREES BEGINNING 400 FT FROM DER, 765 FT RIGHT OF CENTERLINE, UP TO 79 FT AGL/92 FT MSL. TREES BEGINNING 77 FT FROM DER, 655 FT LEFT OF CENTERLINE, UP TO 74 FT AGL/87 FT MSL.

**NOTE: RWY 4R,** LIGHTS BEGINNING 6 FT FROM DER, 4 FT RIGHT OF CENTERLINE, UP TO 2 FT AGL/13 FT MSL. LIGHTS BEGINNING 6 FT FROM DER, 5 FT LEFT OF CENTERLINE, UP TO 2 FT AGL/13 FT MSL. LIGHTS 10 FT FROM DER, ON CENTERLINE, 2 FT AGL/13 FT MSL. TREES BEGINNING 493 FT FROM DER, 468 FT RIGHT OF CENTERLINE, UP TO 34 FT AGL/48 FT MSL. TREES BEGINNING 1757 FT FROM DER, 626 FT RIGHT OF CENTERLINE, UP TO 57 FT AGL/66 FT MSL. TREES BEGINNING 1274 FT FROM DER, 477 FT LEFT OF CENTERLINE, UP TO 73 FT AGL/76 FT MSL.



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**NOTE: RWY 13L**, SIGN AND LIGHTS BEGINNING 2 FT FROM DER, 2 FT RIGHT OF CENTERLINE, UP TO 3 FT AGL/14 FT MSL. LIGHTS 11 FT FROM DER, ON CENTERLINE, 2 FT AGL/13 FT MSL. SIGN, ELECTRICAL EQUIPMENT, AND LIGHTS BEGINNING 11 FT FROM DER, 3 FT LEFT OF CENTERLINE, UP TO 3 FT AGL/14 FT MSL. POLE AND SIGN BEGINNING 254 FT FROM DER, 523 FT RIGHT OF CENTERLINE, UP TO 9 FT AGL/20 FT MSL. ROD 1119 FT FROM DER, 140 FT LEFT OF CENTERLINE, 39 FT AGL/58 FT MSL. TREES BEGINNING 1774 FT FROM DER, 1 FT RIGHT OF CENTERLINE, UP TO 72 FT AGL/91 FT MSL.

**NOTE: RWY 13R**, LIGHTS BEGINNING 4 FT FROM DER, 40 FT RIGHT OF CENTERLINE, UP TO 3 FT AGL/14 FT MSL. LIGHTS BEGINNING 4 FT FROM DER, 15 FT LEFT OF CENTERLINE, UP TO 3 FT AGL/14 FT MSL. BUILDINGS, TOWER, AND GLIDESLOPE ANTENNA BEGINNING 418 FT FROM DER, 404 FT LEFT OF CENTERLINE, UP TO 39 FT AGL/58 FT MSL. TRANSMISSION TOWERS BEGINNING 4749 FT FROM DER, 1385 FT RIGHT OF CENTERLINE, UP TO 139 FT AGL/140 FT MSL.

**NOTE: RWY 22L**, LIGHTS BEGINNING 3 FT FROM DER, 4 FT LEFT OF CENTERLINE, UP TO 2 FT AGL/13 FT MSL. LIGHTS BEGINNING 4 FT FROM DER, 5 FT RIGHT OF CENTERLINE, UP TO 2 FT AGL/13 FT MSL. LIGHTS 5 FT FROM DER, ON CENTERLINE, 2 FT AGL/13 FT MSL. TREES BEGINNING 433 FT FROM DER, 578 FT LEFT OF CENTERLINE, UP TO 27 FT AGL/31 FT MSL.

**NOTE: RWY 22R**, LIGHTS BEGINNING ABEAM DER, 55 FT RIGHT OF CENTERLINE, UP TO 2 FT AGL/13 FT MSL. FENCE, LIGHTS, AND BUSHES BEGINNING ABEAM DER, 54 FT LEFT OF CENTERLINE, UP TO 8 FT AGL/19 FT MSL.

**NOTE: RWY 31L**, LIGHTS BEGINNING 9 FT FROM DER, 80 FT RIGHT OF CENTERLINE, UP TO 3 FT AGL/14 FT MSL. LIGHTS BEGINNING 10 FT FROM DER, 80 FT LEFT OF CENTERLINE, UP TO 2 FT AGL/13 FT MSL. TREES 2075 FT FROM DER, 435 FT LEFT OF CENTERLINE, UP TO 87 FT AGL/91 FT MSL.

**NOTE: RWY 31R**, LIGHTS BEGINNING 8 FT FROM DER, 3 FT LEFT OF CENTERLINE, UP TO 2 FT AGL/13 FT MSL. LIGHTS 10 FT FROM DER, ON CENTERLINE, 2 FT AGL/13 FT MSL. LIGHTS BEGINNING 10 FT FROM DER, 3 FT RIGHT OF CENTERLINE, UP TO 2 FT AGL/13 FT MSL. ELECTRICAL SYSTEM, ELECTRICAL BOX, AND LIGHTS BEGINNING 101 FT FROM DER, ON CENTERLINE, AND LEFT AND RIGHT OF CENTERLINE, UP TO 7 FT AGL/18 FT MSL. APPROACH LIGHTS BEGINNING 200 FT FROM DER, ON CENTERLINE, UP TO 9 FT AGL/27 FT MSL. FENCES, LIGHTS, AND POLES BEGINNING 146 FT FROM DER, 115 FT LEFT OF CENTERLINE, UP TO 19 FT AGL/30 FT MSL. LIGHTS AND TREES BEGINNING 553 FT FROM DER, 191 FT RIGHT OF CENTERLINE, UP TO 34 FT AGL/48 FT MSL. LIGHTS AND POLES BEGINNING 1443 FT FROM DER, 334 FT LEFT OF CENTERLINE, UP TO 55 FT AGL/67 FT MSL. POLE 2162 FT FROM DER, 562 FT RIGHT OF CENTERLINE, 54 FT AGL/66 FT MSL. ANTENNA 3916 FT FROM DER, 1550 FT RIGHT OF CENTERLINE, 111 FT AGL/130 FT MSL.

**CONTROLLING OBSTACLES:**

**LOST COMMUNICATIONS PROCEDURES:**

**ADDITIONAL FLIGHT DATA:**

**CHART:** CROSS JFK R-253 AT OR ABOVE 2500, MAINTAIN 5000.

**CHART:** CRI 2.00 DME ARC, CRI 3.00 DME ARC, JFK 4.50 DME ARC. **CHART:** CRI R-039, CRI R-223, CRI R-176, JFK R-253.

**CHART:** LAT/LONGS AT EACH FACILITY AND FIX

**CHART:** TOP ALTITUDE: 5000

**AIRPORTS SERVED:**

JOHN F. KENNEDY INTL

NEW YORK, NY

**COMMUNICATIONS:**

ATIS, CLNC DEL, NEW YORK DEP CON

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**FIXES AND/OR NAVAIDS:**

TAFFY, EBONY, TUSKY, ALLEX, BRADD, KANNI, WHALE, VITOL, DOVEY, JOBOC, TOPPS, QUBIS, MARTN, JUDDS, GREKI, MERIT, HAPIE, WITCH, YAHOO, JFK VOR/DME, ACK VOR/DME, PUT VOR/DME, BOS VORTAC, ENE VORTAC, HFD VOR/DME.

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**REMARKS:**

MVA ALTITUDES: RWY 4L/R – 1600; RWY 22L/22R – 1500; RWY 13L/13R – 1500; RWY 31L/31R – 1800.

**COORDINATED WITH:**

ATA, ALPA, APA, AOPA, NBAA, ZNY, N90, JFK TOWER, ARPT MGR

**CHANGES:**

1. UPDATED DP ROUTE DESCRIPTIONS: EDITORIAL CHANGES MADE TO UPDATE STANDARD TERMINOLOGY AND REMOVE CLIMB RWY HEADING, MOVED DEPARTURE NOTE STATING RADAR VECTORS TO BETTE AND EXPECT CLEARANCE ALTITUDE/ROUTING TO DESCRIPTION, MOVED MAINTAIN 5000 FROM EACH DP LINE TO ONE LOCATION IN ROUTING DESCRIPTION.
2. ADDED RADAR REQUIRED NOTE.
3. ADDED DME REQUIRED TO GATEWAY CLIMB FOR RWY 22L/R.
4. REMOVED DP NOTE REFERENCING THRESHOLD LOCATION AND CROSSING ALTITUDES.
5. UPDATED TAKEOFF MINIMUMS SHOWING ALL RWYS AS STANDARD.
6. CHARTED TOP ALTITUDE.
7. UPDATED TAKEOFF OBSTACLE NOTES.
8. REMOVED RNAV AIRCRAFT ONLY AND NORTH AMERICAN ROUTE (NAR) ONLY NOTES..
9. REMOVED CRI, BETTE, AND OGY FROM CHARTING OF FIXES AND/OR NAVAIDS.
10. REMOVED NANTUCKET TRANSITION.

**REASONS:**

1. MODERNIZE TERMINOLOGY; 8260.46 STATES TO NOT USE CLIMB RWY HEADING; PROVIDE ONE LOCATION FOR DEPARTURE INFORMATION TO SIMPLIFY INSTRUCTIONS.
2. INITIAL DP REQUIRES VECTORING TO BETTE.
3. GATEWAY CLIMB REQUIRES DME
4. NO LONGER NEEDED, ALL SURFACES CLEAR.
5. ODP AMENDED FOLLOWING RSA PROJECT, PREVIOUSLY LISTED AND ODP CONTROLLING OBSTACLES ARE NOT IN SID OBSTACLE EVAL AREAS..
6. AFS MEMO REQUIREMENT TO FACILITATE "CLIMB VIA" PHRASEOLOGY.
7. ODP AMENDED FOLLOWING RSA PROJECT, PROVIDE NEW OBSTACLE REFERENCES.
8. ELIMINATE COMBINATION OF RNAV REQUIREMENTS ON GROUND BASED SID.
9. NOT NEEDED - PREVIOUSLY LISTED IN DEPARTURE ROUTE DESCRIPTIONS.

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10. ELIMINATE COMBINATION OF RNAV REQUIREMENTS ON GROUND BASED SID.

08/12/2015: This is an UPDATED copy of the form developed on 05/07/2015.

1. Change publication to HARD DATE.