

FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE  
TITLE 14 CFR PART 97.33

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated.  
Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or feet RVR.

|                                 |                                            |                                        |                                              |                            |
|---------------------------------|--------------------------------------------|----------------------------------------|----------------------------------------------|----------------------------|
| <u>AIRPORT ID</u><br>2W6        | <u>PROCEDURE NAME</u><br>RNAV (GPS) RWY 11 | <u>ORIGINAL/AMENDMENT</u><br>3         | <u>CITY</u><br>LEONARDTOWN                   | <u>STATE</u><br>MD         |
| <u>AIRPORT ELEVATION</u><br>142 | <u>TDZE</u><br>142                         | <u>SUPERSEDED</u><br>RNAV (GPS) RWY 11 | <u>ORIGINAL/AMENDMENT</u><br>2               | <u>DATED</u><br>03/29/2018 |
| <u>FACILITY</u><br>RNAV         | <u>COORDINATES OF FACILITIES</u>           | <u>ACTUAL EFFECTIVE DATE</u>           | <u>REQUIRED EFFECTIVE DATE</u><br>12/26/2024 | <u>MAG VAR</u><br>10W      |
|                                 |                                            |                                        |                                              | <u>EPOCH YEAR</u><br>1995  |
|                                 |                                            |                                        |                                              | <u>CANCEL/SUSPEND</u>      |

TERMINAL ROUTES

| FROM                  | FIX TYPE | TO                    | FIX TYPE | LEG TYPE | FO/FB | RNP  | COURSE | DISTANCE | ALTITUDE |
|-----------------------|----------|-----------------------|----------|----------|-------|------|--------|----------|----------|
| LEKVE                 | IF/IAF   | ONAFE                 |          | TF       | FB    | 1.00 | 112.17 | 4.74     | 1800     |
| ONAFE                 | FAF      | DUYEV/3.26 NM TO RW11 |          | TF       | FB    | 0.30 | 112.25 | 1.82     |          |
| DUYEV/3.26 NM TO RW11 |          | RW11                  | MAP      | TF       | FO    | 0.30 | 112.25 | 3.26     |          |
| RW11                  | MAP      | 620 MSL               |          | CA       |       |      | 112.25 |          | 620      |
| 620 MSL               |          | GOFER                 |          | DF       | FO    | 1.00 |        |          | 2000     |

MISSED APPROACH

MAP:

LPV: DA  
LNAV/VNAV: DA  
LNAV: RW11

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 620 THEN CLIMBING LEFT TURN TO 2000 DIRECT GOFER AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

|                                                                               |                            |                |                       |                        |         |
|-------------------------------------------------------------------------------|----------------------------|----------------|-----------------------|------------------------|---------|
| 1. PT                                                                         | SIDE OF COURSE             | OUTBOUND       | FT WITHIN             | MILES OF               | (IAF)   |
| 2. HOLD NW LEKVE, RT, 148.00 INBOUND, 2000 FT. IN LIEU OF PT (IAF), MAX 6000. |                            |                |                       |                        |         |
| 3. FAC: 112.25                                                                | FAF: ONAFE                 |                | DIST FAF TO MAP: 5.08 | DIST FAF TO THLD: 5.08 |         |
| 4. MIN ALT: LEKVE 2000, ONAFE 1800, DUYEV/3.26 NM TO RW11 1220                |                            |                |                       |                        |         |
| 5. DIST TO THLD FROM OM:                                                      | MM:                        | IM:            | 150 HAT:              | 277 HAT: 0.74          | GS ANT: |
| 6. MIN GP INCPT: 1800                                                         | GP ALT AT PFAF: ONAFE 1800 |                |                       | OM:                    | MM:     |
| 7. GP ANGLE: 3.00                                                             | 34:1: IS NOT CLEAR         | 20:1: IS CLEAR | TCH: 42.3             |                        | IM:     |
| 8. MSA FROM: RW11 2100                                                        |                            |                |                       |                        |         |



PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: CIRCLING RWY 29 NA AT NIGHT.  
CHART NOTE: RWY 11 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.  
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15°C OR ABOVE 54°C.  
CHART PLANVIEW NOTE: WASHINGTON, DC SFRA, CTC POTOMAC APP CON.

ADDITIONAL FLIGHT DATA:

HOLD NE, RT, 225.99 INBOUND.  
CHART FAS OBST: 274 TREE (24-052976) 381839N/0763346W.  
CHART 398 TOWER (24-000047) 381913N/0764009W.  
338 AAO 381912N/0763800W.  
CHART R-4007.  
CHART R-6611A.  
CHART R-6613A.  
CHART WASHINGTON, DC METROPOLITAN SFRA.  
CHART VDP AT 1.12 NM TO RW11.  
WAAS CHANNEL # 70502  
REFERENCE PATH ID: W11A  
LTP HAE: 8.7 M

MINIMUMS:

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

ALTERNATE: NA ☒

| CATEGORY:    | A      |     |         | B      |     |         | C      |       |         | D      |       |         | E      |     |         |
|--------------|--------|-----|---------|--------|-----|---------|--------|-------|---------|--------|-------|---------|--------|-----|---------|
| FINAL TYPE   | DA/MDA | VIS | HAT/HAA | DA/MDA | VIS | HAT/HAA | DA/MDA | VIS   | HAT/HAA | DA/MDA | VIS   | HAT/HAA | DA/MDA | VIS | HAT/HAA |
| LPV DA       | 419    | 1   | 277     | 419    | 1   | 277     | 419    | 1     | 277     | 419    | 1     | 277     |        |     |         |
| LNAV/VNAV DA | 503    | 1   | 361     | 503    | 1   | 361     | 503    | 1     | 361     | 503    | 1     | 361     |        |     |         |
| LNAV MDA     | 540    | 1   | 398     | 540    | 1   | 398     | 540    | 1 1/8 | 398     | 540    | 1 1/8 | 398     |        |     |         |
| CIRCLING     | 660    | 1   | 518     | 660    | 1   | 518     | 840    | 2     | 698     | 840    | 2 1/4 | 698     |        |     |         |

CHANGES - REASONS

1. TERMINAL ROUTES: CHANGED LEKVE TO ONAFE (FAF) COURSE/DISTANCE FROM 112.8/4.93 TO 112.17/4.74 - FAF RELOCATED 0.19NM EAST DUE TO RUNWAY EXTENSION.
2. TERMINAL ROUTES: CHANGED ONAFE TO STEPDOWN FIX (SDF) DUYEV COURSE/DISTANCE CHANGED FROM 112.24/1.79 TO 112.25/1.82 - BOTH FAF AND SDF LOCATIONS MOVED DUE TO RUNWAY EXTENSION.
3. TERMINAL ROUTES: DECREASED STEPDOWN FIX (SDF) DUYEV COURSE/DISTANCE TO MAP FROM 112.24/3.30 TO 112.25/3.26 - SDF LOCATION MOVED 0.15NM WEST DUE TO RUNWAY EXTENSION.
4. TERMINAL ROUTES: CHANGED MAP TO CA COURSE FROM 112.24 TO 112.25 - COURSE REALIGNED DUE TO RUNWAY EXTENSION.
5. PROFILE LINE 2: ADDED MAX 6000 - IAW 8260.19J, PARA 8-6-7 (B) (2).
6. PROFILE LINE 3: FAC CHANGED FROM 112.24 TO 112.25 - FAF RELOCATED DUE TO RUNWAY EXTENSION.
7. PROFILE LINE 3: DECREASED DIST FAF TO MAP AND DIST FAF TO THLD FROM 5.09 TO 5.08 - FAF RELOCATED 0.19NM EAST DUE TO RUNWAY EXTENSION.
8. PROFILE LINE 4: REMOVED ASTERISK FROM SDF MIN ALTITUDE (1220); ADDITIONAL FLIGHT DATA: REMOVED \*LNAV ONLY - NOT REQUIRED.
9. PROFILE LINE 5: CHANGED 277 HAT FROM 0.75 TO 0.74 – AIRPORT’S 1200 FT. RUNWAY EXTENSION DECREASED 0.01 NM FROM FAF TO LTP DISTANCE.
10. PROFILE LINE 7: ADDED “20:1: IS CLEAR” IAW 8260.19J, 8-6-7 (G) (3); NO OBSTACLE PENETRATION ON 20:1 OBSTACLE IDENTIFICATION SURFACE.
11. PROFILE LINE 7: UPDATED TCH FROM 37.4 TO 42.3 - THRESHOLD RELOCATED DUE TO AIRPORT’S 1200 FT. RUNWAY EXTENSION.
12. PBN REQUIREMENTS NOTES: DELETED "CHART NOTE: DME/DME RNP-0.3 NA" AND ADDED "RNP APCH – GPS" TO PBN REQUIREMENTS NOTE - IAW 8260.58C TABLE 1-2-1.
13. NOTES: ADDED "CIRCLING RWY 29 NA AT NIGHT" - DUE TO RWY 29 20:1 OBSTACLE IDENTIFICATION SURFACE PENETRATION.
14. NOTES: CHANGED “WASHINGTON DC ADIZ” TO “WASHINGTON, DC SFRA” - IAW JO 7110.65AA.
15. ADDITIONAL FLIGHT DATA: UPDATED CHART NOTE FROM “FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C (5F) OR ABOVE 54C (130F)” TO “FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15°C OR ABOVE 54°C.” - IAW 8260.19J, PARA 8-6-10 (R).
16. ADDITIONAL FLIGHT DATA: DELETED "269 TREE (24-032380) 381839N/0763343W" AND ADDED "274 TREE (24-052976) 381839N/0763346W" - NEW CONTROLLING FAS OBSTACLE; ANNOTATED IAW 8260.19J, PARA 8-6-10 (C).
17. ADDITIONAL FLIGHT DATA: UPDATED 7:1 OBSTACLE FROM “338 AAO 381918N/0763745W” TO “338 AAO 381913N/0764009W” - NEW TARGETS CALCULATION USING MITRE 3DEP TERRAIN EVALUATION SOFTWARE; IAW 8260.19J, PARA 8-6-11 (C).
18. ADDITIONAL FLIGHT DATA: UPDATED “CHART: WASHINGTON DC METROPOLITAN AIZ” TO “CHART: WASHINGTON, DC METROPOLITAN SFRA” - IAW JO 7110.65AA.
19. ADDITIONAL FLIGHT DATA: UPDATED VDP FROM 1.07 NM TO 1.12 NM - DUE TO INCREASE IN TCH FROM 37.4 TO 42.3, AND LNAV MDA/HAT FROM 520/378 TO 540/398.
20. ADDITIONAL FLIGHT DATA: DELETED “CHART CIRCLING ICON” – NOT REQUIRED; IAW AJV-A MEMORANDUM 270, “REVISED CIRCLING MANEUVERING AREA CRITERIA IMPLEMENTATION PLAN,” DATED 30/09/2021.
21. REDUCED LTP HAE FROM 9.1M TO 8.7M - AIRPORT’S 1200 FT. RUNWAY EXTENSION RELOCATED LTP.
22. MINIMUMS: CHANGED ALTERNATE MINIMA FROM “CAT D 800-2 1/4” TO “NA” - PARA 8-6-12 (B). FIELD AWOS WX REPORTING IS NOT ON WMSCR.
23. MINIMUMS: INCREASED LNAV MDA/HAT FROM 520/378 TO 540/398; INCREASED CATS C/D VISIBILITY FROM “1” TO “1 1/8” - DUE TO NEW CONTROLLING OBSTACLE.
24. FAS DATA: LTP/FTP LATITUDE/LONGITUDE CHANGED FROM "381859.6580N/0763325.8505W" TO "381902.1925N/ 0763340.5635W" - THRESHOLD RELOCATED DUE TO AIRPORT’S 1200 FT. RUNWAY EXTENSION.
25. FAS DATA: UPDATED LTP/FTP ELLIPSOIDAL HEIGHT FROM “+00091” TO “+00087” - NEW FAS DATA CALCULATIONS DUE TO AIRPORT’S 1200 FT. RUNWAY EXTENSION.
26. FAS DATA: FPAP LATITUDE/LONGITUDE CHANGED FROM "381840.6275N/0763135.2500W" TO "381843.1525N/ 0763149.9645W" - THRESHOLD RELOCATED DUE TO AIRPORT’S 1200 FT. RUNWAY EXTENSION.
27. FAS DATA: LENGTH OFFSET CHANGED FROM 1488 TO 1120 - DISTANCE BETWEEN THE DER AND THE FPAP DECREASED BY 368 FT DUE TO AIRPORT’S 1200 FT. RUNWAY EXTENSION.
28. FAS DATA: CRC REMAINDER CHANGED FROM “06EE4D2C” TO “0D91F389” – FPAP RELOCATED DUE TO RUNWAY EXTENSION.
29. FAS DATA: LTP/FPAP ORTHOMETRIC HEIGHT CHANGED FROM “+00432” TO “+00429” - NEW FAS DATA CALCULATIONS DUE TO AIRPORT’S 1200 FT. RUNWAY EXTENSION.

08/28/24: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 05/20/2024.

1. REQUIRED EFFECTIVE DATE CHANGED FROM 9/5/2024 TO 12/26/2024.

COORDINATED WITH:

A4A

☐

ALPA

☒

AOPA

☒

APA

☐

HAI

☐

NBAA

☒

OTHER:

ZDC, NHK APP CON, MD DEPT OF AVN, AMGR

Digitally signed by

ERIC N SUSKI

May 23, 2024

Digitally signed by

PARNELL R PRASSADA

May 20, 2024

Digitally signed by

ERIC N SUSKI

May 23, 2024

FLIGHT CHECKED BY

PENDING

OFFICE

DATE

DEVELOPED BY

PARNELL PRASSADA

OFFICE

AJV-A431

DATE

03/14/2024

APPROVED BY

ERIC N SUSKI

OFFICE

AJV-A431

DATE

TITLE

MANAGER



AIRPORT ID  
2W6

PROCEDURE NAME  
RNAV (GPS) RWY 11

ORIGINAL/AMENDMENT  
3

CITY  
LEONARDTOWN

STATE  
MD

**FAS DATA BLOCK INFORMATION**

| <u>DATA FIELD</u>                        | <u>DATA</u>   |
|------------------------------------------|---------------|
| OPERATION TYPE                           | 0             |
| SBAS SERVICE PROVIDER IDENTIFIER         | 0             |
| AIRPORT IDENTIFIER                       | 2W6           |
| RUNWAY                                   | RW11          |
| APPROACH PERFORMANCE DESIGNATOR          | 0             |
| ROUTE INDICATOR                          |               |
| REFERENCE PATH DATA SELECTOR             | 0             |
| REFERENCE PATH IDENTIFIER (APPROACH ID)  | W11A          |
| LTP/FTP LATITUDE                         | 381902.1925N  |
| LTP/FTP LONGITUDE                        | 0763340.5635W |
| LTP/FTP ELLIPSOIDAL HEIGHT               | +00087        |
| FPAP LATITUDE                            | 381843.1525N  |
| FPAP LONGITUDE                           | 0763149.9645W |
| THRESHOLD CROSSING HEIGHT (TCH)          | 00042.3       |
| TCH UNITS SELECTOR (METERS OR FEET USED) | F             |
| GLIDEPATH ANGLE (GPA)                    | 03.00         |
| COURSE WIDTH AT THRESHOLD                | 106.75        |
| LENGTH OFFSET                            | 1120          |
| HORIZONTAL ALERT LIMIT (HAL)             | 40.0          |
| VERTICAL ALERT LIMIT (VAL)               | 50.0          |

|               |          |
|---------------|----------|
| CRC REMAINDER | 0D91F389 |
|---------------|----------|

**ADDITIONAL PATH POINT RECORD INFORMATION**

|                         |        |
|-------------------------|--------|
| ICAO CODE               | K6     |
| LTP ORTHOMETRIC HEIGHT  | +00429 |
| FPAP ORTHOMETRIC HEIGHT | +00429 |



FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

|                          |                                            |                      |                            |                    |                                 |                         |
|--------------------------|--------------------------------------------|----------------------|----------------------------|--------------------|---------------------------------|-------------------------|
| <u>AIRPORT ID</u><br>2W6 | <u>PROCEDURE NAME</u><br>RNAV (GPS) RWY 11 | <u>AMDT NO.</u><br>3 | <u>CITY</u><br>LEONARDTOWN | <u>STATE</u><br>MD | <u>AIRPORT ELEVATION</u><br>142 | <u>FACILITY</u><br>RNAV |
|--------------------------|--------------------------------------------|----------------------|----------------------------|--------------------|---------------------------------|-------------------------|

PART A: OBSTRUCTION DATA SEGMENTS

INTERMEDIATE

FROM TO  
LEKVE (IF/IAF) ONAFE

|                    |                         |                 |             |             |           |            |            |             |             |                    |                |
|--------------------|-------------------------|-----------------|-------------|-------------|-----------|------------|------------|-------------|-------------|--------------------|----------------|
| <u>RNP</u><br>1.00 | <u>DISTANCE</u><br>4.74 | <u>PAT</u>      | <u>MAP</u>  |             |           |            | <u>HAT</u> | <u>HMAS</u> |             |                    |                |
| <u>OBSTRUCTION</u> | <u>COORDINATES</u>      | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u> | <u>ROC</u> | <u>OCS</u> | <u>CG</u>   | <u>CGTA</u> | <u>ADJUSTMENTS</u> | <u>MIN ALT</u> |
| TOWER (24-020059)  | 382002.60N/0764045.70W  | 484             | 500         | 50          | 5D        | 500        |            |             |             | AT816              | 1800           |
| TERRAIN            | 382142.00N/0764127.00W  | 164 (200)       |             |             |           |            |            |             |             | AS1500             | 1700           |

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LPV

FROM TO  
ONAFE RW11

|                    |                         |                 |                  |                   |             |            |            |           |             |                    |                |
|--------------------|-------------------------|-----------------|------------------|-------------------|-------------|------------|------------|-----------|-------------|--------------------|----------------|
| <u>RNP</u><br>0.30 | <u>DISTANCE</u><br>5.08 | <u>PAT</u>      | <u>MAP</u><br>DA | <u>HAT</u><br>277 | <u>HMAS</u> |            |            |           |             |                    |                |
| <u>OBSTRUCTION</u> | <u>COORDINATES</u>      | <u>ELEV MSL</u> | <u>HORZ</u>      | <u>VERT</u>       | <u>AC</u>   | <u>ROC</u> | <u>OCS</u> | <u>CG</u> | <u>CGTA</u> | <u>ADJUSTMENTS</u> | <u>MIN ALT</u> |
| TREE (24-021299)   | 381902.61N/0763404.26W  | 221             | 20               | 3                 | 1A          |            | 34:1       |           |             | XP27               | 419            |

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

XP - TO RETAIN ORIGINAL MINIMA



FINAL: LNAV/VNAV

FROM

ONAFE

TO

RW11

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             | <u>HAT</u> |            | <u>HMAS</u> |           |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|------------|------------|-------------|-----------|-------------|--------------------|----------------|
| 0.30               | 5.08                   |                 | DA          |             | 361        |            |             |           |             |                    |                |
| <u>OBSTRUCTION</u> | <u>COORDINATES</u>     | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u>  | <u>ROC</u> | <u>OCS</u>  | <u>CG</u> | <u>CGTA</u> | <u>ADJUSTMENTS</u> | <u>MIN ALT</u> |
| TREE (24-052976)   | 381839.02N/0763345.64W | 274             | 20          | 3           | 1A         | 161        |             |           |             | MA31 XP37          | 503            |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

XP - TO RETAIN ORIGINAL MINIMA

FINAL: LNAV

FROM

ONAFE

TO

DUYEV/3.26 NM TO RW11

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             | <u>HAT</u> |            | <u>HMAS</u> |           |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|------------|------------|-------------|-----------|-------------|--------------------|----------------|
| 0.30               | 1.82                   |                 |             |             |            |            |             |           |             |                    |                |
| <u>OBSTRUCTION</u> | <u>COORDINATES</u>     | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u>  | <u>ROC</u> | <u>OCS</u>  | <u>CG</u> | <u>CGTA</u> | <u>ADJUSTMENTS</u> | <u>MIN ALT</u> |
| AAO                | 382018.00N/0763842.00W | 342             | 215         | 8           | 4B         | 250        |             |           |             | RA40 DG588         | 1220           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL: LNAV STEPDOWN

FROM

DUYEV/3.26 NM TO RW11

TO

RW11

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             | <u>HAT</u> |            | <u>HMAS</u> |           |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|------------|------------|-------------|-----------|-------------|--------------------|----------------|
| 0.30               | 3.26                   |                 | RW11        |             | 398        |            |             |           |             |                    |                |
| <u>OBSTRUCTION</u> | <u>COORDINATES</u>     | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u>  | <u>ROC</u> | <u>OCS</u>  | <u>CG</u> | <u>CGTA</u> | <u>ADJUSTMENTS</u> | <u>MIN ALT</u> |
| TREE (24-052976)   | 381839.02N/0763345.64W | 274             | 20          | 3           | 1A         | 250        |             |           |             |                    | 540            |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

HOLD-IN-LIEU OF PT

FROM

LEKVE

TO

P-4

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             | <u>HAT</u> |            | <u>HMAS</u> |           |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|------------|------------|-------------|-----------|-------------|--------------------|----------------|
|                    |                        | P-4             |             |             |            |            |             |           |             |                    |                |
| <u>OBSTRUCTION</u> | <u>COORDINATES</u>     | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u>  | <u>ROC</u> | <u>OCS</u>  | <u>CG</u> | <u>CGTA</u> | <u>ADJUSTMENTS</u> | <u>MIN ALT</u> |
| TOWER (24-000578)  | 382449.00N/0764630.00W | 426             | 500         | 125         | 5E         | 1000       |             |           |             | AT500              | 2000           |
| TERRAIN            | 382554.00N/0764836.00W | 193 (200)       |             |             |            |            |             |           |             | AS1500             | 1700           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH: LPV

FROM

DA

TO

GOFER

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             | <u>HAT</u> |            | <u>HMAS</u> |           |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|------------|------------|-------------|-----------|-------------|--------------------|----------------|
| 0.30               |                        |                 |             |             |            |            |             | 219       |             |                    |                |
| <u>OBSTRUCTION</u> | <u>COORDINATES</u>     | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u>  | <u>ROC</u> | <u>OCS</u>  | <u>CG</u> | <u>CGTA</u> | <u>ADJUSTMENTS</u> | <u>MIN ALT</u> |
|                    |                        |                 |             |             |            |            | ASC         |           |             |                    | 2000           |
| TOWER (24-037752)  | 382258.71N/0762634.58W | 563             | 50          | 20          | 2C         | 1000       |             |           |             |                    | 1600           |
| TERRAIN            | 381839.00N/0763345.00W | 160 (200)       |             |             |            |            |             |           |             | AS1500             | 1700           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH: LNAV/VNAV

FROM

DA

TO

GOFER

| <u>RNP</u>          | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             | <u>HAT</u> |            | <u>HMAS</u> |           |             |                    |                |
|---------------------|------------------------|-----------------|-------------|-------------|------------|------------|-------------|-----------|-------------|--------------------|----------------|
| 0.30                |                        |                 |             |             |            |            | 342         |           |             |                    |                |
| <u>OBSTRUCTION</u>  | <u>COORDINATES</u>     | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u>  | <u>ROC</u> | <u>OCS</u>  | <u>CG</u> | <u>CGTA</u> | <u>ADJUSTMENTS</u> | <u>MIN ALT</u> |
| ANTENNA (24-052860) | 381950.56N/0763347.00W | 295             | 20          | 10          | 1B         |            | ASC         |           |             | AC10               | 2000           |
| TOWER (24-037752)   | 382258.71N/0762634.58W | 563             | 50          | 20          | 2C         | 1000       |             |           |             |                    | 1600           |
| TERRAIN             | 381839.00N/0763345.00W | 160 (200)       |             |             |            |            |             |           |             | AS1500             | 1700           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSSED APPROACH: LNAV

FROM

RW11

TO

GOFER

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             |           |            | <u>HAT</u> | <u>HMAS</u> |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|-----------|------------|------------|-------------|-------------|--------------------|----------------|
| 0.30-1.00          |                        |                 |             |             |           |            |            |             |             | 440                |                |
| <u>OBSTRUCTION</u> | <u>COORDINATES</u>     | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u> | <u>ROC</u> | <u>OCS</u> | <u>CG</u>   | <u>CGTA</u> | <u>ADJUSTMENTS</u> | <u>MIN ALT</u> |
|                    |                        |                 |             |             |           |            | ASC        |             |             |                    | 2000           |
| TOWER (24-037752)  | 382258.71N/0762634.58W | 563             | 50          | 20          | 2C        | 1000       |            |             |             |                    | 1600           |
| TERRAIN            | 381839.00N/0763345.00W | 160 (200)       |             |             |           |            |            |             |             | AS1500             | 1700           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

CIRCLING

☐ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☐ CAT E

☐ NOT AUTHORIZED

| OBSTRUCTION       | COORDINATES            | RADIUS | HAA | ELEV MSL | HORZ | VERT | AC | ROC | OCS | ADJUSTMENTS | MIN ALT |
|-------------------|------------------------|--------|-----|----------|------|------|----|-----|-----|-------------|---------|
| CATEGORY A        |                        |        |     |          |      |      |    |     |     |             |         |
| TANK (24-000835)  | 381821.00N/0763238.00W | 1.30   | 518 | 310      | 250  | 50   | 4D | 300 |     | AC50        | 660     |
| CATEGORY B        |                        |        |     |          |      |      |    |     |     |             |         |
| TANK (24-000835)  | 381821.00N/0763238.00W | 1.81   | 518 | 310      | 250  | 50   | 4D | 300 |     | AC50        | 660     |
| CATEGORY C        |                        |        |     |          |      |      |    |     |     |             |         |
| TOWER (24-000935) | 381656.00N/0763335.00W | 2.84   | 698 | 479      | 500  | 50   | 5D | 300 |     | AC50        | 840     |
| CATEGORY D        |                        |        |     |          |      |      |    |     |     |             |         |
| TOWER (24-020929) | 381613.16N/0763620.68W | 3.71   | 698 | 484      | 20   | 3    | 1A | 300 |     |             | 840     |

CIRCLING REMARKS:

MSA

CENTER

RW11

RADIUS

25

| SECTOR  | OBSTRUCTION     | COORDINATES            | BEARING | DISTANCE | ELEV MSL | HORZ | VERT | AC | ROC  | OCS | ADJUSTMENTS | MIN ALT |
|---------|-----------------|------------------------|---------|----------|----------|------|------|----|------|-----|-------------|---------|
| 360-360 | TWR (24-000957) | 384034.69N/0765009.23W | 339     | 25.1     | 1049     | 500  | 125  | 5E | 1000 |     |             | 2100    |

MSA REMARKS:



NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

WASHINGTON ARTCC CONCURRED WITH CHARTING R-4007/R6613A

HOLD IN LIEU IS OFFSET 35.83 DEGREES FROM THE INTERMEDIATE SEGMENT TO REMAIN CLEAR OF SPECIAL USE AIRSPACE.

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

NHK APP CON, DCA FSS

|                           |                 |                      |                         |                 |                  |                    |
|---------------------------|-----------------|----------------------|-------------------------|-----------------|------------------|--------------------|
| <u>WX SERVICE</u>         | <u>LOCATION</u> | <u>HRS OPERATION</u> | <u>ALTIMETER SOURCE</u> | <u>DISTANCE</u> | <u>SERVICE-A</u> | <u>ADJUSTMENTS</u> |
| AWOS-3                    | 2W6             | 24                   | 2W6                     | 0               | N                | 0                  |
| <u>BACK-UP WX SERVICE</u> | <u>LOCATION</u> | <u>HRS OPERATION</u> | <u>ALTIMETER SOURCE</u> | <u>DISTANCE</u> | <u>SERVICE-A</u> | <u>ADJUSTMENTS</u> |
| ATIS                      | NHK             | 24                   | NHK                     | 7.45            | Y                | 34                 |

WX REMARKS:

RASS PRESSURE PATTERNS THE SAME

K2W6 142, KNHK 24

RA = 33.8.

| <u>PRIMARY NAVAID</u>                      | <u>MONITOR POINT</u>   | <u>HRS OPERATION</u>       | <u>CAT</u> |
|--------------------------------------------|------------------------|----------------------------|------------|
| <u>APPROACH AND RUNWAY LIGHTING SYSTEM</u> | <u>RUNWAY MARKINGS</u> | <u>RUNWAY VISUAL RANGE</u> |            |
| RW29 - MIRL (PCL), REIL (PCL), PAPI-4L     | NPI-F                  |                            |            |
| RW11 - MIRL (PCL), REIL (PCL), PAPI-4L     | NPI-G                  |                            |            |

|                         |                           |            |                        |                          |                   |            |
|-------------------------|---------------------------|------------|------------------------|--------------------------|-------------------|------------|
| <u>GLIDESLOPE ANGLE</u> | <u>ELEV RWY THRESHOLD</u> | <u>TCH</u> | <u>ELEV GS ANTENNA</u> | <u>DISTANCE FROM RWY</u> | <u>VGSI ANGLE</u> | <u>TCH</u> |
| 3.00                    | 140.6                     | 42.3       |                        |                          | 3.00              | 42.3       |

FINAL APPROACH COURSE AIMING

|                  |              |                    |                              |
|------------------|--------------|--------------------|------------------------------|
| RUNWAY THRESHOLD | <div>X</div> | FT FROM THRESHOLD  | DISPLACED THRESHOLD DISTANCE |
| ON CENTERLINE    | <div>X</div> | FT FROM CENTERLINE |                              |

CRITICAL TEMPERATURES

|                     |                      |            |                |
|---------------------|----------------------|------------|----------------|
| <u>CRITICAL LOW</u> | <u>CRITICAL HIGH</u> | <u>ACT</u> | <u>APT ISA</u> |
| -15C                | +54C                 | -15C       | +14.72C        |

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM STANDARD -30C ISA DEVIATION.

CRITICAL LOW TEMPERATURE BASED ON ACT.

DESCENT RATE (FPM): STANDARD TEMP 957 HIGH TEMP 1262.

"VISUAL PORTION OF FINAL" PENETRATIONS

|                                                        |                |
|--------------------------------------------------------|----------------|
| FINAL TYPE                                             | CIRCLING: RW29 |
| 20:1                                                   |                |
| 181 TREE (24-052925) 381844.8300N/0763220.5100W (3.19) |                |



|                                                         |  |                                            |  |                      |                                                         |                    |                                 |                         |
|---------------------------------------------------------|--|--------------------------------------------|--|----------------------|---------------------------------------------------------|--------------------|---------------------------------|-------------------------|
| <b>AIRPORT ID</b><br>2W6                                |  | <b>PROCEDURE NAME</b><br>RNAV (GPS) RWY 11 |  | <b>AMDT NO.</b><br>3 | <b>CITY</b><br>LEONARDTOWN                              | <b>STATE</b><br>MD | <b>AIRPORT ELEVATION</b><br>142 | <b>FACILITY</b><br>RNAV |
| FINAL TYPE                                              |  | LPV, LNAV/VNAV, LNAV                       |  |                      |                                                         |                    |                                 |                         |
| 34:1                                                    |  |                                            |  |                      |                                                         |                    |                                 |                         |
| 221 TREE (24-021299) 381902.6100N/0763404.2600W (31.75) |  |                                            |  |                      | 193 TREE (24-052066) 381908.0300N/0763358.8000W (12.82) |                    |                                 |                         |
| 189 TREE (24-052083) 381906.4700N/0763357.7500W (12.21) |  |                                            |  |                      | 193 TREE (24-052981) 381909.1800N/0763359.7400W (9.94)  |                    |                                 |                         |
| 178 TREE (24-052915) 381903.7200N/0763355.2500W (8.68)  |  |                                            |  |                      | 174 TREE (24-052779) 381902.7600N/0763353.8800W (8.43)  |                    |                                 |                         |
| 167 TREE (24-052798) 381904.1900N/0763350.5300W (8.20)  |  |                                            |  |                      | 185 TREE (24-052607) 381906.6600N/0763357.9800W (7.57)  |                    |                                 |                         |
| 182 TREE (24-052709) 381905.4200N/0763357.1200W (7.32)  |  |                                            |  |                      | 182 TREE (24-051920) 381905.8800N/0763357.0600W (7.17)  |                    |                                 |                         |
| 179 TREE (24-052327) 381905.4200N/0763355.9100W (7.09)  |  |                                            |  |                      | 186 TREE (24-052149) 381908.2000N/0763358.4900W (6.42)  |                    |                                 |                         |
| 174 TREE (24-052513) 381903.6900N/0763354.8300W (5.67)  |  |                                            |  |                      | 171 TREE (24-052583) 381903.9200N/0763353.5900W (5.36)  |                    |                                 |                         |
| 181 TREE (24-052605) 381907.0300N/0763357.1800W (5.16)  |  |                                            |  |                      | 174 TREE (24-052904) 381904.1800N/0763354.9900W (4.99)  |                    |                                 |                         |
| 179 TREE (24-052171) 381904.6000N/0763357.1100W (4.87)  |  |                                            |  |                      | 171 TREE (24-052874) 381904.1500N/0763353.8100W (4.71)  |                    |                                 |                         |
| 167 TREE (24-052582) 381907.0500N/0763351.6200W (3.88)  |  |                                            |  |                      | 190 TREE (24-052315) 381910.0200N/0763400.9400W (3.66)  |                    |                                 |                         |
| 164 TREE (24-052164) 381903.0800N/0763351.6400W (3.36)  |  |                                            |  |                      | 163 TREE (24-052935) 381901.4100N/0763351.6800W (3.33)  |                    |                                 |                         |
| 178 TREE (24-052621) 381906.2200N/0763357.1500W (2.75)  |  |                                            |  |                      | 185 TREE (24-052825) 381908.0100N/0763359.9700W (2.15)  |                    |                                 |                         |
| 168 TREE (24-052928) 381903.1700N/0763354.2600W (1.30)  |  |                                            |  |                      | 169 TREE (24-052416) 381902.0700N/0763355.1100W (1.05)  |                    |                                 |                         |
| 165 TREE (24-052854) 381902.3300N/0763353.4200W (0.76)  |  |                                            |  |                      | 165 TREE (24-052901) 381904.5600N/0763352.9400W (0.44)  |                    |                                 |                         |
| 167 TREE (24-052072) 381902.0700N/0763354.5100W (0.43)  |  |                                            |  |                      | 166 TREE (24-052716) 381904.3800N/0763353.5100W (0.25)  |                    |                                 |                         |
| <b><u>PENETRATIONS REMARKS:</u></b>                     |  |                                            |  |                      |                                                         |                    |                                 |                         |
|                                                         |  |                                            |  |                      |                                                         |                    |                                 |                         |

**HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS**

and/or

**5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS**

|                                     |
|-------------------------------------|
| <b><u>PENETRATIONS REMARKS:</u></b> |
|                                     |



PART C: GENERAL REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

100 FT VEGETATION PER FPT.

TAA NOT DEVELOPED PER ATC REQUEST.

CAPTURE FIX NOT REQUIRED IAW "WAIVER TO ORDER 8260.58, UNITED STATES STANDARD FOR PERFORMANCE BASED NAVIGATION (PBN) INSTRUMENT PROCEDURE DESIGN, ON APPENDIX C PBN TRANSITION TO ILS/GLS/LPV FINAL," DATED AUGUST 22, 2023.

MINIMUM VISIBILITY 1 SM DUE TO RUNWAY PROTECTION ZONE (RPZ) AREA.

CONTINGENCY NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE NHK ALTIMETER SETTING AND INCREASE LPV DA TO 453 FEET; INCREASE LNAV/VNAV DA TO 537 FEET AND ALL VISIBILITIES 1/8 SM. INCREASE ALL MDAS 40 FEET AND LNAV VISIBILITY CAT C/D 1/8 SM. BARO-VNAV AND VDP NA WHEN USING NHK ALTIMETER SETTING.

ORDER 8260.3 CHAPTER 2 APPLIED TO 398 TOWER (24-000047) 381913.00N/0764009.00W.

ORDER 8260.3 CHAPTER 2 APPLIED TO 338 AAO 381912.00N/0763800.00W.

ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.

PART D: AIRSPACE

DOCKET #

ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE

|                 |       |                                 |        |
|-----------------|-------|---------------------------------|--------|
| DISTANCE FROM   | THLD  | TO 1000FT POINT                 | 3.19   |
| WIDTH OF        | FINAL | SEGMENT AT 1000FT POINT         | 1.20   |
| TRUE COURSE OF  | FINAL | SEGMENT CONTAINING 1000FT POINT | 102.25 |
| HIGH TERRAIN IN | FINAL | SEGMENT CONTAINING 1000FT POINT | 200    |
| DISTANCE FROM   | THLD  | TO 1500FT POINT                 | 4.88   |
| WIDTH OF        | FINAL | SEGMENT AT 1500FT POINT         | 1.95   |
| TRUE COURSE OF  | FINAL | SEGMENT CONTAINING 1500FT POINT | 102.17 |
| HIGH TERRAIN IN | FINAL | SEGMENT CONTAINING 1500FT POINT | 200    |

|                                            |                            |
|--------------------------------------------|----------------------------|
| THRESHOLD COORDINATES (IF STR-IN)          | 381902.19N/0763340.56W     |
| ARP COORDINATES                            | 381856.55N/0763307.77W     |
| RUNWAY APCH END AND DIST FURTHEST FROM ARP | RUNWAY 11 DISTANCE 0.44 NM |
| FAF COORDINATES                            | 382007.08N/0763958.89W     |
| FIX NAME COORDINATES                       |                            |

REMARKS

PART E: PREPARED BY

|                  |          |            |                                     |
|------------------|----------|------------|-------------------------------------|
| NAME             | OFFICE   | DATE       | TITLE                               |
| PARNELL PRASSADA | AJV-A431 | 03/14/2024 | AERONAUTICAL INFORMATION SPECIALIST |

