

**FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
RNAV (RNP) 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>DEN         | <u>PROCEDURE NAME</u><br>RNAV (RNP) Z RWY 16R | <u>ORIGINAL/AMENDMENT</u><br>2            | <u>CITY</u><br>DENVER                     | <u>STATE</u><br>CO        |
| <u>AIRPORT ELEVATION</u><br>5434 | <u>TDZE</u><br>5326                           | <u>SUPERSEDED</u><br>RNAV (RNP) Z RWY 16R | <u>DATED</u><br>06/12/2025                | <u>MAG VAR</u><br>8E      |
| <u>FACILITY</u><br>RNAV          | <u>COORDINATES OF FACILITIES</u>              | <u>ORIGINAL/AMENDMENT</u><br>1            | <u>REQUIRED EFFECTIVE DATE</u><br>ROUTINE | <u>EPOCH YEAR</u><br>2015 |
|                                  |                                               | <u>ACTUAL EFFECTIVE DATE</u>              | <u>CANCEL/SUSPEND</u>                     |                           |

**TERMINAL ROUTES**

| <u>FROM</u> | <u>FIX TYPE</u> | <u>TO</u> | <u>FIX TYPE</u> | <u>LEG TYPE</u> | <u>FO/FB</u> | <u>RNP</u> | <u>COURSE</u>               | <u>DISTANCE</u> | <u>ALTITUDE</u> |
|-------------|-----------------|-----------|-----------------|-----------------|--------------|------------|-----------------------------|-----------------|-----------------|
| TSHNR       | IAF             | PECIY     |                 | TF              | FB           | 1.00       | 153.97                      | 4.46            | 11500           |
| KIPPR       | IAF             | HAYLY     |                 | TF              | FB           | 1.00       | 248.52                      | 4.63            | 12000           |
| HAYLY       |                 | PECIY     |                 | TF              | FB           | 1.00       | 214.81                      | 3.79            | 11500           |
| PECIY       |                 | BUDUJ     |                 | TF              | FB           | 1.00       | 169.60                      | 2.36            | 10600           |
| BUDUJ       |                 | ZOREG     |                 | TF              | FB           | 1.00       | 169.60                      | 2.41            | 10000           |
| KAILE       | IAF             | OGINE     |                 | TF              | FB           | 1.00       | 116.15                      | 1.90            | 10400           |
| OGINE       |                 | ZOREG     |                 | TF              | FB           | 1.00       | 150.18                      | 2.58            | 10000           |
| ZOREG       |                 | HAROS     |                 | TF              | FB           | 1.00       | 169.60                      | 2.65            | 10000           |
| HAROS       | IF              | BRDOR     |                 | TF              | FB           | 1.00       | 169.44                      | 3.96            | 9000            |
| BRDOR       |                 | FESKA     |                 | TF              | FB           | 1.00       | 169.71                      | 3.74            | 8000            |
| FESKA       |                 | APASE     |                 | TF              | FB           | 1.00       | 169.17                      | 3.15            | 7000            |
| CLFFF       | IF              | HELBY     |                 | TF              | FB           | 1.00       | 352.54                      | 3.40            | 10000           |
| HELBY       |                 | APASE     |                 | RF              | FB           | 1.00       | (3.18 NM RADIUS CW (CFFVZ)) | 9.83            | 7000            |
| APASE       | PFAF            | UJNOR     | MAP             | TF              | FO           | 0.30       | 169.51                      | 5.10            |                 |
| UJNOR       | MAP             | 5900 MSL  |                 | CA              |              |            | 169.51                      |                 | 5900            |
| 5900 MSL    |                 | CANRO     |                 | DF              | FB           | 1.00       |                             |                 |                 |
| CANRO       |                 | ZOOKS     |                 | TF              | FO           | 1.00       | 224.38                      | 11.83           | 10000           |

**MISSED APPROACH**

**MAP:**

RNP: DA

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 5900 THEN CLIMBING RIGHT TURN TO 10000 DIRECT CANRO AND ON TRACK 224.38 TO ZOOKS AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**



PROFILE:

|    |                         |                |                 |            |                  |                   |      |         |  |     |  |  |  |  |  |
|----|-------------------------|----------------|-----------------|------------|------------------|-------------------|------|---------|--|-----|--|--|--|--|--|
| 1. | PT                      | SIDE OF COURSE | OUTBOUND        | FT WITHIN  | MILES OF         | (IAF)             |      |         |  |     |  |  |  |  |  |
| 2. | PROFILE STARTS AT APASE |                |                 |            |                  |                   |      |         |  |     |  |  |  |  |  |
| 3. | FAC:                    | 169.51         | PFAF:           | APASE      | DIST FAF TO MAP: | DIST FAF TO THLD: |      |         |  |     |  |  |  |  |  |
| 4. | MIN ALT:                | APASE 7000     |                 |            |                  |                   |      |         |  |     |  |  |  |  |  |
| 5. | DIST TO THLD FROM PFAF: | 5.10           | MM:             | IM:        | 150 HAT:         | 272 HAT:          | 0.69 | GS ANT: |  |     |  |  |  |  |  |
| 6. | MIN GP INCPT:           | 7000           | GP ALT AT PFAF: | APASE 7000 |                  | OM:               |      | MM:     |  | IM: |  |  |  |  |  |
| 7. | GP ANGLE:               | 3.00           | 34:1:           | IS CLEAR   | 20:1:            | IS CLEAR          | TCH: | 55.1    |  |     |  |  |  |  |  |
| 8. | MSA FROM:               | UJNOR 10200    |                 |            |                  |                   |      |         |  |     |  |  |  |  |  |

PBN REQUIREMENTS NOTE:

RNP AR APCH - GPS. AUTHORIZATION REQUIRED. FROM CLFFF: RF.

NOTES:

CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -26°C OR ABOVE 54°C.  
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.  
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.  
CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.30 ALL CATS VISIBILITY TO RVR 4500.  
CHART SPEED ICON IN PLANVIEW AT TSHNR: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT KIPPR: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT KAILE: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT HAROS: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT CLFFF: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

CHART PLANVIEW NOTE: FINAL APPROACH COURSE OFFSET 3.00 DEGREES.  
HOLD NE, RT, 229.00 INBOUND.  
CHART MANDATORY 13000 AT TSHNR.  
CHART MANDATORY 12000 AT KIPPR.  
CHART MANDATORY 11000 AT KAILE.  
CHART MANDATORY 11000 AT CLFFF.  
FAC CROSSES RWY C/L EXTENDED 2600 FT FROM THLD.

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

| 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 |
| AUTHORIZATION REQUIRED |        |      |         |        |      |         |        |      |         |        |      |         |        |     |         |
| RNP 0.30 DA            | 5598   | 2400 | 272     | 5598   | 2400 | 272     | 5598   | 2400 | 272     | 5598   | 2400 | 272     |        |     |         |



CHANGES - REASONS

1. REPLACED MISSED APPROACH FROM "CLIMB TO 5900 THEN CLIMBING RIGHT TURN TO 10000 DIRECT BINBE AND HOLD, CONTINUE CLIMB-IN-HOLD TO 10000" WITH "CLIMB TO 5900 THEN CLIMBING RIGHT TURN TO 10000 DIRECT CANRO AND ON TRACK 224.83 TO ZOOKS AND HOLD" WITH CHANGES REFLECTED IN TERMINAL ROUTES - REQUESTED BY ATC/FPT TO MEET TRIPLE WIDELY SPACED SIMULTANEOUS INDEPENDENT PARALLEL INSTRUMENT APPROACH (SIPIA) OPERATIONS CRITERIA.
2. PROFILE LINE 7: CHANGED TCH FROM 55.0 TO 55.1 - TO MATCH ILS OR LOC RWY 16R DESIGN TCH.
3. CHANGED PBN REQUIREMENTS NOTE FROM "RNP AR APCH - GPS." TO "RNP AR APCH - GPS. AUTHORIZATION REQUIRED. FROM CLFFF: RF." - PER 8260.19J PARA. (5)(B)1 AND 2.
4. CHANGED MISSED HOLDING FROM 'HOLD E, RT, 257.46 INBOUND' TO 'HOLD NE, RT, 229.00 INBOUND' IN ADDITIONAL FLIGHT DATA - NEW MISSED APPROACH CLEARANCE LIMIT AND HOLD PATTERN.
5. REMOVED PFAF FROM FIX TYPE COLUMN OF INTERMEDIATE STEPDOWNES FESKA-APASE AND HELBY-APASE IN TERMINAL ROUTES - NOT REQUIRED.
6. PROFILE LINE 5: CHANGED DIST TO THLD FROM 271 HAT: 0.69 TO 272 HAT: 069 - AVERAGE COLD TEMPERATURE (ACT) CHANGED FROM -25C TO -26C BASED ON UPDATED 5-YEAR WEATHER HISTORY.
7. CHANGED RNP 0.30 DA/HAT FROM 5597/271 TO 5598/272 - AVERAGE COLD TEMPERATURE (ACT) CHANGED FROM -25C TO -26C BASED ON UPDATED 5-YEAR WEATHER HISTORY.

COORDINATED WITH:

A4A

☒

ALPA

☒

AOPA

☒

APA

☒

HAI

☐

NBAA

☒

OTHER: ZDV, DEN APP CON, DEN ATCT, AMGR

FLIGHT CHECKED BY

NATHAN J CHOTT

Digitally signed by

RAKE MCGRAW

Jan 15, 2026

OFFICE

AJF

DATE

12/17/2025

Digitally signed by

RAKE MCGRAW

Jan 15, 2026

OFFICE

AJV-A422

DATE

10/07/2025

Digitally signed by

RAKE MCGRAW

Jan 15, 2026

OFFICE

AJV-A420

DATE

02/12/2026

TITLE

MANAGER

APPROVED BY

BEV L BORDY



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

| <u>AIRPORT ID</u> | <u>PROCEDURE NAME</u> | <u>AMDT NO.</u> | <u>CITY</u> | <u>STATE</u> | <u>AIRPORT ELEVATION</u> | <u>FACILITY</u> |
|-------------------|-----------------------|-----------------|-------------|--------------|--------------------------|-----------------|
| DEN               | RNAV (RNP) Z RWY 16R  | 2               | DENVER      | CO           | 5434                     | RNAV            |

## PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM TSHNR TO PECIY

RNP 1.00 DISTANCE 4.46 PAT MAP HAT HMAS

| <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                | 401618.00N/1044130.00W | 5138            | 215         | 8           | 4B        | 1000       |            |           |             | AC8 AT5354         | 11500          |
| TERRAIN            | 401727.00N/1044039.00W | 4895 (4900)     |             |             |           |            |            |           |             | AS1500             | 6400           |

## COMPUTATIONS

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

## SEGMENT REMARKS:

INITIAL

FROM KIPPR TO HAYLY

RNP 1.00 DISTANCE 4.63 PAT MAP HAT HMAS

| <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                | 401936.00N/1043542.00W | 5073            | 215         | 8           | 4B        | 1000       |            |           |             | AC8 AT5919         | 12000          |
| TERRAIN            | 401933.00N/1043542.00W | 4872 (4900)     |             |             |           |            |            |           |             | AS1500             | 6400           |

## COMPUTATIONS

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

## SEGMENT REMARKS:



INITIAL

FROM

HAYLY

TO

PECIY

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             |           |            | <u>HAT</u> | <u>HMAS</u> |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|-----------|------------|------------|-------------|-------------|--------------------|----------------|
| 1.00               | 3.79                   |                 |             |             |           |            |            |             |             |                    |                |
| <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                | 401542.00N/1044148.00W | 5194            | 215         | 8           | 4B        | 1000       |            |             |             | AC8 AT5298         | 11500          |
| TERRAIN            | 401654.00N/1044042.00W | 4927 (4900)     |             |             |           |            |            |             |             | AS1500             | 6400           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL STEPDOWN

FROM

PECIY

TO

BUDUJ

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             |           |            | <u>HAT</u> | <u>HMAS</u> |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|-----------|------------|------------|-------------|-------------|--------------------|----------------|
| 1.00               | 2.36                   |                 |             |             |           |            |            |             |             |                    |                |
| <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 (08-000570)  | 401540.90N/1044222.80W | 5275            | 500         | 50          | 5D        | 1000       |            |             |             | AC50 AT4275        | 10600          |
| TERRAIN            | 401448.00N/1044233.00W | 5026 (5000)     |             |             |           |            |            |             |             | AS1500             | 6500           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INITIAL STEPDOWN

FROM

BUDUJ

TO

ZOREG

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             |           | <u>HAT</u> | <u>HMAS</u> |           |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|-----------|------------|-------------|-----------|-------------|--------------------|----------------|
| 1.00               | 2.41                   |                 |             |             |           |            |             |           |             |                    |                |
| <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 (08-000570)  | 401540.90N/1044222.80W | 5275            | 500         | 50          | 5D        | 1000       |             |           |             | AC50 AT3675        | 10000          |
| TERRAIN            | 401254.00N/1044333.00W | 5072 (5100)     |             |             |           |            |             |           |             | AS1500             | 6600           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

KAILE

TO

OGINE

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             |           | <u>HAT</u> | <u>HMAS</u> |           |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|-----------|------------|-------------|-----------|-------------|--------------------|----------------|
| 1.00               | 1.90                   |                 |             |             |           |            |             |           |             |                    |                |
| <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 (08-000570)  | 401540.90N/1044222.80W | 5275            | 500         | 50          | 5D        | 1000       |             |           |             | AT4075 AC50        | 10400          |
| TERRAIN            | 401409.00N/1044506.00W | 4947 (4900)     |             |             |           |            |             |           |             | AS1500             | 6400           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INITIAL STEPDOWN

FROM

OGINE

TO

ZOREG

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             | <u>HAT</u> |            | <u>HMAS</u> |           |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|------------|------------|-------------|-----------|-------------|--------------------|----------------|
| 1.00               | 2.58                   |                 |             |             |            |            |             |           |             |                    |                |
| <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 (08-000570)  | 401540.90N/1044222.80W | 5275            | 500         | 50          | 5D         | 1000       |             |           |             | AC50 AT3675        | 10000          |
| TERRAIN            | 401254.00N/1044333.00W | 5072 (5100)     |             |             |            |            |             |           |             | AS1500             | 6600           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL STEPDOWN

FROM

ZOREG

TO

HAROS

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             | <u>HAT</u> |            | <u>HMAS</u> |           |             |                    |                |
|--------------------|------------------------|-----------------|-------------|-------------|------------|------------|-------------|-----------|-------------|--------------------|----------------|
| 1.00               | 2.65                   |                 |             |             |            |            |             |           |             |                    |                |
| <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                | 401015.00N/1044418.00W | 5292            | 215         | 8           | 4B         | 1000       |             |           |             | AC8 AT3700         | 10000          |
| TERRAIN            | 401015.00N/1044427.00W | 5091 (5100)     |             |             |            |            |             |           |             | AS1500             | 6600           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE

FROM

HAROS

TO

BRDOR

RNP

1.00

DISTANCE

3.96

PAT

MAP

HAT

HMAS

| OBSTRUCTION | COORDINATES            | ELEV MSL    | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
|-------------|------------------------|-------------|------|------|----|-----|-----|----|------|-------------|---------|
| AAO         | 400733.00N/1044445.00W | 5391        | 215  | 8    | 4B | 500 |     |    |      | AC8 AT3101  | 9000    |
| TERRAIN     | 400730.00N/1044445.00W | 5190 (5200) |      |      |    |     |     |    |      | AS1500      | 6700    |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE STEPDOWN

FROM

BRDOR

TO

FESKA

RNP

1.00

DISTANCE

3.74

PAT

MAP

HAT

HMAS

| OBSTRUCTION       | COORDINATES            | ELEV MSL    | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
|-------------------|------------------------|-------------|------|------|----|-----|-----|----|------|-------------|---------|
| TOWER (08-000787) | 400319.72N/1044448.77W | 5570        | 250  | 50   | 4D | 500 |     |    |      | AC50 AT1880 | 8000    |
| TERRAIN           | 400324.00N/1044454.00W | 5160 (5200) |      |      |    |     |     |    |      | AS1500      | 6700    |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE: STEPDOWN

FROM

FESKA

TO

APASE

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             | <u>HAT</u> |            |            |           |             | <u>HMAS</u>        |                |
|--------------------|------------------------|-----------------|-------------|-------------|------------|------------|------------|-----------|-------------|--------------------|----------------|
| 1.00               | 3.15                   |                 |             |             |            |            |            |           |             |                    |                |
| <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                | 395754.00N/1043942.00W | 5447            | 215         | 8           | 4B         | 500        |            |           |             | AC8 AT1045         | 7000           |
| TERRAIN            | 395900.00N/1043927.00W | 5196 (5200)     |             |             |            |            |            |           |             | AS1500             | 6700           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM

CLFFF

TO

HELBY

| <u>RNP</u>         | <u>DISTANCE</u>        | <u>PAT</u>      | <u>MAP</u>  |             | <u>HAT</u> |            |            |           |             | <u>HMAS</u>        |                |
|--------------------|------------------------|-----------------|-------------|-------------|------------|------------|------------|-----------|-------------|--------------------|----------------|
| 1.00               | 3.40                   |                 |             |             |            |            |            |           |             |                    |                |
| <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                | 395742.00N/1045254.00W | 5404            | 215         | 8           | 4B         | 500        |            |           |             | AC8 AT4088         | 10000          |
| TERRAIN            | 395742.00N/1045254.00W | 5203 (5200)     |             |             |            |            |            |           |             | AS1500             | 6700           |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE STEPDOWN

FROM

HELBY

TO

APASE

| <u>RNP</u> | <u>DISTANCE</u> | <u>PAT</u> | <u>MAP</u> | <u>HAT</u> | <u>HMAS</u> |
|------------|-----------------|------------|------------|------------|-------------|
| 1.00       | 9.83            |            |            |            |             |

| <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 (08-000787)  | 400319.72N/1044448.77W | 5570            | 250         | 50          | 4D        | 500        |            |           |             | AT880 AC50         | 7000           |
| TERRAIN            | 400142.00N/1044530.00W | 5223 (5200)     |             |             |           |            |            |           |             | AS1500             | 6700           |

COMPUTATIONS

RF SEGMENT

HELBY-APASE

ALT

10000

CIAS

210

KTAS

251.11

HAA

4566.20

VKTW

32.60

TR

3.18

BA

20.23

DTA

0.00

COURSE CHANGE

0.00

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

(CFFVZ)/9.83 NM

SEGMENT REMARKS:

FINAL

FROM

APASE

TO

UJNOR

| <u>RNP</u> | <u>DISTANCE</u> | <u>PAT</u> | <u>MAP</u> | <u>HAT</u> | <u>HMAS</u> |
|------------|-----------------|------------|------------|------------|-------------|
| 0.30       | 5.10            |            | DA         | 272        |             |

| <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        |           |             | VEB22              | 5598           |

COMPUTATIONS

ALT

CIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH: LEVEL SURFACE

FROM

DA

TO

ZOOKS

| <u>RNP</u> | <u>DISTANCE</u> | <u>PAT</u> | <u>MAP</u> | <u>HAT</u> | <u>HMAS</u> |
|------------|-----------------|------------|------------|------------|-------------|
| 0.30-1.00  |                 |            |            |            | 5437        |

| <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        |           |             |                    | 10000          |
| AAO                | 394054.00N/1050736.00W | 5991            | 215         | 8           | 4B        | 1000       |            |           |             |                    | 7000           |
| TERRAIN            | 394118.00N/1050651.00W | 5662 (5700)     |             |             |           |            |            |           |             | AS1500             | 7200           |

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

MSA

CENTER

UJNOR

RADIUS

25

| <u>SECTOR</u> | <u>OBSTRUCTION</u> | <u>COORDINATES</u>     | <u>BEARING</u> | <u>DISTANCE</u> | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u> | <u>ROC</u> | <u>OCS</u> | <u>ADJUSTMENTS</u> | <u>MIN ALT</u> |
|---------------|--------------------|------------------------|----------------|-----------------|-----------------|-------------|-------------|-----------|------------|------------|--------------------|----------------|
| 360-360       | AAO                | 395330.00N/1051851.00W | 262            | 28.5            | 9128            | 215         | 8           | 4B        | 1000       |            |                    | 10200          |

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

50 FT VEGETATION APPLIED PER FPT.

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

DEN APP CON, DEN TOWER, ZDV ARTCC

| <u>WX SERVICE</u> | <u>LOCATION</u> | <u>HRS OPERATION</u> | <u>ALTIMETER SOURCE</u> | <u>DISTANCE</u> | <u>WMSCR</u> | <u>ADJUSTMENTS</u> |
|-------------------|-----------------|----------------------|-------------------------|-----------------|--------------|--------------------|
| ASOS              | DEN             | 24                   | DEN                     |                 | Y            | 0                  |

| <u>BACK-UP WX SERVICE</u> | <u>LOCATION</u> | <u>HRS OPERATION</u> | <u>ALTIMETER SOURCE</u> | <u>DISTANCE</u> | <u>WMSCR</u> | <u>ADJUSTMENTS</u> |
|---------------------------|-----------------|----------------------|-------------------------|-----------------|--------------|--------------------|
|---------------------------|-----------------|----------------------|-------------------------|-----------------|--------------|--------------------|

WX REMARKS:

NO BACKUP ALTIMETER SETTING REQUIRED. REDUNDANT SOURCES ON AIRPORT.



| PRIMARY NAVAID                             | MONITOR POINT | HRS OPERATION   | CAT                          |
|--------------------------------------------|---------------|-----------------|------------------------------|
| APPROACH AND RUNWAY LIGHTING SYSTEM        |               | RUNWAY MARKINGS | RUNWAY VISUAL RANGE          |
| RW07 - MALSR, TDZ, HIRL, C/LINE, PAPI-4R   |               | PIR-G           | APPROACH, ROLL OUT           |
| RW08 - MALSR, HIRL, C/LINE, PAPI-4L        |               | PIR-G           | APPROACH, ROLL OUT           |
| RW16L - MALSR, HIRL, TDZ, C/LINE, PAPI-4L  |               | PIR-G           | APPROACH, MIDPOINT, ROLL OUT |
| RW16R - MALSR, HIRL, TDZ, C/LINE, PAPI-4R  |               | PIR-G           | APPROACH, MIDPOINT, ROLL OUT |
| RW17L - MALSR, C/LINE, HIRL, PAPI-4L       |               | PIR-G           | APPROACH, MIDPOINT, ROLL OUT |
| RW17R - MALSR, TDZ, HIRL, C/LINE, PAPI-4L  |               | PIR-G           | APPROACH, MIDPOINT, ROLL OUT |
| RW25 - MALSR, HIRL, C/LINE, PAPI-4L        |               | PIR-G           | APPROACH, ROLL OUT           |
| RW26 - MALSR, C/LINE, HIRL, TDZ, PAPI-4L   |               | PIR-G           | APPROACH, ROLL OUT           |
| RW34L - ALSF-2, C/LINE, TDZ, HIRL, PAPI-4L |               | PIR-G           | APPROACH, MIDPOINT, ROLL OUT |
| RW34R - ALSF-2, TDZ, C/LINE, HIRL, PAPI-4L |               | PIR-G           | APPROACH, MIDPOINT, ROLL OUT |
| RW35L - ALSF-2, C/LINE, TDZ, HIRL, PAPI-4R |               | PIR-G           | APPROACH, MIDPOINT, ROLL OUT |
| RW35R - ALSF-2, HIRL, TDZ, C/LINE, PAPI-4R |               | PIR-G           | APPROACH, MIDPOINT, ROLL OUT |

GLIDESLOPE ANGLE

3.00

ELEV RWY THRESHOLD

5321.8

TCH

55.1

ELEV GS ANTENNA

DISTANCE FROM RWY

VGSI ANGLE

3.00

TCH

71.2

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD

ON CENTERLINE

X

2600FT FROM THRESHOLD

FT FROM CENTERLINE

DISPLACED THRESHOLD DISTANCE

CRITICAL TEMPERATURES

CRITICAL LOW

-26C

CRITICAL HIGH

+54C

ACT

-26C

APT ISA

+4.24C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2020-2024).  
CRITICAL LOW TEMPERATURE BASED ON ACT.  
DESCENT RATE (FPM): STANDARD TEMP 1030 HIGH TEMP 1359.

"VISUAL PORTION OF FINAL" PENETRATIONS



HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

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

PENETRATIONS REMARKS:

PART C: GENERAL REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

VDP NOT ESTABLISHED - RNP PROCEDURE.

WAIVER FOR INITIAL SEGMENT KAILE-OGINE: LEG LENGTH TOO SHORT FOR ATC VECTORING.

APPROVAL LETTER: MANDATORY ALTITUDE AT IF CLFF.

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                 | 2.90   |
| WIDTH OF        | FINAL | SEGMENT AT 1000FT POINT         | 1.20   |
| TRUE COURSE OF  | FINAL | SEGMENT CONTAINING 1000FT POINT | 177.51 |
| HIGH TERRAIN IN | FINAL | SEGMENT CONTAINING 1000FT POINT | 5400   |
| DISTANCE FROM   | THLD  | TO 1500FT POINT                 | 4.46   |
| WIDTH OF        | FINAL | SEGMENT AT 1500FT POINT         | 1.20   |
| TRUE COURSE OF  | FINAL | SEGMENT CONTAINING 1500FT POINT | 177.51 |
| HIGH TERRAIN IN | FINAL | SEGMENT CONTAINING 1500FT POINT | 5400   |

|                                            |                           |
|--------------------------------------------|---------------------------|
| THRESHOLD COORDINATES (IF STR-IN)          | 395344.87N/1044145.90W    |
| ARP COORDINATES                            | 395142.00N/1044023.40W    |
| RUNWAY APCH END AND DIST FURTHEST FROM ARP | RUNWAY 7 DISTANCE 2.77 NM |
| FAF COORDINATES                            | 395850.60N/1044201.43W    |
| FIX NAME COORDINATES                       |                           |

REMARKS

PART E: PREPARED BY

|             |          |            |                                     |
|-------------|----------|------------|-------------------------------------|
| NAME        | OFFICE   | DATE       | TITLE                               |
| RALPH DUMAR | AJV-A422 | 10/07/2025 | AERONAUTICAL INFORMATION SPECIALIST |

