

**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</u><br>MUSKEGON COUNTY | <u>AIRPORT ID</u><br>KMKG        | <u>PROCEDURE NAME</u><br>RNAV (GPS) RWY 32      | <u>ORIGINAL/AMENDMENT</u><br>2D           | <u>CITY</u><br>MUSKEGON    | <u>STATE</u><br>MI   |                           |
| <u>AIRPORT ELEVATION</u><br>629   | <u>TDZE</u><br>629               | <u>SUPERSEDED</u><br>RNAV (GPS) RWY 32          | <u>ORIGINAL/AMENDMENT</u><br>2C           | <u>DATED</u><br>05/24/2018 | <u>MAG VAR</u><br>4W | <u>EPOCH YEAR</u><br>1995 |
| <u>FACILITY</u><br>RNAV           | <u>COORDINATES OF FACILITIES</u> | <u>ACTUAL EFFECTIVE DATE</u><br>5 NOVEMBER 2020 | <u>REQUIRED EFFECTIVE DATE</u><br>ROUTINE | <u>CANCEL/SUSPEND</u>      |                      |                           |

**TERMINAL ROUTES**

| <u><b>FROM</b></u> | <u><b>FIX TYPE</b></u> | <u><b>TO</b></u> | <u><b>FIX TYPE</b></u> | <u><b>LEG TYPE</b></u> | <u><b>FO/FB</b></u> | <u><b>RNP</b></u> | <u><b>COURSE</b></u> | <u><b>DISTANCE</b></u> | <u><b>ALTITUDE</b></u> |
|--------------------|------------------------|------------------|------------------------|------------------------|---------------------|-------------------|----------------------|------------------------|------------------------|
| BULLY              |                        | SINNI            |                        | TF                     | FO                  | 1.00              | 098.47               | 20.41                  | 2700                   |
| SINNI              | IF/IAF                 | PADBE            |                        | TF                     | FB                  | 1.00              | 321.52               | 6.23                   | 2200                   |
| PADBE              | FAF                    | RW32             | MAP                    | TF                     | FO                  | 0.30              | 321.45               | 4.78                   |                        |
| RW32               | MAP                    | 829 MSL          |                        | CA                     |                     |                   | 321.45               |                        |                        |
| 829 MSL            |                        | NENUE            |                        | DF                     | FO                  | 1.00              |                      |                        | 2300                   |

**MISSED APPROACH**

**MAP:**

LPV: DA  
LNAV/VNAV: DA  
LNAV: RW32

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 2300 DIRECT NENUE AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD SE SINNI, RT, 321.52 INBOUND, 2700 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 321.45      FAF: PADBE      DIST FAF TO MAP: 4.78      DIST FAF TO THLD: 4.78

4. MIN ALT: SINNI 2700, PADBE 2200

5. DIST TO THLD FROM OM:      MM:      IM:      150 HAT:      200 HAT: 0.47      GS ANT:      MM:      IM:

6. MIN GP INCPT: 2200      GP ALT AT FAF : PADBE 2200      OM:      MM:      IM:

7. GP ANGLE: 3.00      34:1: IS CLEAR      20:1: IS CLEAR      TCH: 49.9

8. MSA FROM: RW32 2900

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18°C OR ABOVE 54°C.  
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV VISIBILITY ALL CATS TO RVR 4000, LNAV/VNAV VISIBILITY ALL CATS TO RVR 4500, AND LNAV VISIBILITY CATS A/B TO RVR 5500 AND CATS C/D TO 1 3/8 SM.  
CHART NOTE: \*\*RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD TO DA, NA WHEN USING FREMONT ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

CHART: ASR.  
CHART CIRCLING ICON.  
CHART VDP AT 1.26 NM TO RW32\*  
\*LNAV ONLY  
WAAS CHANNEL #63010  
REFERENCE PATH ID: W32A  
FAS OBST: 829 AAO 430745N/0860945W.  
850 AAO 430640N/0860833W.  
HOLD NW, RT, 141.27 INBOUND  
LTP HAE: 157.8 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE.

| 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**     | 829    | 2400 | 200     | 829    | 2400 | 200     | 829    | 2400  | 200     | 829    | 2400 | 200     |        |     |         |
| LNAV/VNAV DA | 915    | 2400 | 286     | 915    | 2400 | 286     | 915    | 2400  | 286     | 915    | 2400 | 286     |        |     |         |
| LNAV MDA     | 1080   | 2400 | 451     | 1080   | 2400 | 451     | 1080   | 4500  | 451     | 1080   | 4500 | 451     |        |     |         |
| CIRCLING     | 1080   | 1    | 451     | 1180   | 1    | 551     | 1200   | 1 1/2 | 571     | 1200   | 2    | 571     |        |     |         |



CHANGES - REASONS

1. CHANGED CHART NOTE FROM "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18 C (0 F) OR ABOVE 54 C (130 F)" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18 C OR ABOVE 54 C" - 8260.19H 8-6-9.S.
2. REMOVED CHART NOTE: DME/DME RNP-0.3 NA AND ADDED RNP APCH TO PBN REQUIREMENTS NOTES - CURRENT NOTATION PER 8260.19H.
3. CHANGED CHART NOTE FROM "FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO RVR 4500; LNAV CATS A AND B VISIBILITY TO RVR 5500 AND CATS C AND D VISIBILITY TO 1 3/8 SM" TO "FOR INOPERATIVE ALS, INCREASE LPV VISIBILITY ALL CATS TO RVR 4000, LNAV/VNAV VISIBILITY ALL CATS TO RVR 4500, AND LNAV VISIBILITY CATS A/B TO RVR 5500 AND CATS C/D TO 1 3/8 SM" - 8260.3D TABLES 3-3-1, 3-3-3, AND 3-3-4.
4. ADDED "MAX 6000" TO LINE 2 - 8260.19H 8-6-7.B.
5. CHANGED ALTERNATE MINIMUMS FROM "STANDARD" TO "STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE" - PROCEDURE UTILIZES BACKUP ALTIMETER; IMPLEMENTATION OF FAA ORDER 8260.19H CHANGE 1, ATTACHMENT 4.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZAU, MKG APP CON, MKG ATCT, AMGR

FLIGHT CHECKED BY

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED

OFFICE

Digitally signed by  
JOHN BORDY  
Mar 24, 2020

DATE

DEVELOPED BY

ALLAN WILL (ANTHONY CAPPABIANCO)

Digitally signed by  
JOHN BORDY  
Mar 24, 2020

OFFICE

AJV-A423

DATE

08/23/2019

APPROVED BY

MARLON ROBINSON

Digitally signed by  
JOHN BORDY  
Mar 24, 2020

OFFICE

AJV-A420

DATE

TITLE  
MANAGER



FAS DATA BLOCK INFORMATION

| <u>DATA FIELD</u>                        | <u>DATA</u>   |
|------------------------------------------|---------------|
| OPERATION TYPE                           | 0             |
| SBAS SERVICE PROVIDER IDENTIFIER         | 0             |
| AIRPORT IDENTIFIER                       | KMKG          |
| RUNWAY                                   | RW32          |
| APPROACH PERFORMANCE DESIGNATOR          | 0             |
| ROUTE INDICATOR                          |               |
| REFERENCE PATH DATA SELECTOR             | 0             |
| REFERENCE PATH IDENTIFIER (APPROACH ID)  | W32A          |
| LTP/FTP LATITUDE                         | 430945.6820N  |
| LTP/FTP LONGITUDE                        | 0861319.3645W |
| LTP/FTP ELLIPSOIDAL HEIGHT               | +01578        |
| FPAP LATITUDE                            | 431051.2735N  |
| FPAP LONGITUDE                           | 0861441.7945W |
| THRESHOLD CROSSING HEIGHT (TCH)          | 00049.9       |
| TCH UNITS SELECTOR (METERS OR FEET USED) | F             |
| GLIDEPATH ANGLE (GPA)                    | 03.00         |
| COURSE WIDTH AT THRESHOLD                | 106.75        |
| LENGTH OFFSET                            | 0888          |
| HORIZONTAL ALERT LIMIT (HAL)             | 40.0          |
| VERTICAL ALERT LIMIT (VAL)               | 35.0          |
| CRC REMAINDER                            | 04975952      |

ADDITIONAL PATH POINT RECORD INFORMATION

|                         |        |
|-------------------------|--------|
| ICAO CODE               | K5     |
| LTP ORTHOMETRIC HEIGHT  | +01916 |
| FPAP ORTHOMETRIC HEIGHT | +01916 |

