

McMinnville Municipal Airport  
Airport Layout Plan Report

**APPENDIX 3**

**FAA Airport Design  
Printouts**

MMV  
AIRPORT AND RUNWAY DATA

Airport elevation . . . . . 163 feet  
Mean daily maximum temperature of the hottest month . . . . . 82.70 F.  
Maximum difference in runway centerline elevation . . . . . 2 feet  
Length of haul for airplanes of more than 60,000 pounds . . . . . 500 miles  
Wet and slippery runways

RUNWAY LENGTHS RECOMMENDED FOR AIRPORT DESIGN

Small airplanes with approach speeds of less than 30 knots . . . . . 300 feet  
Small airplanes with approach speeds of less than 50 knots . . . . . 810 feet  
Small airplanes with less than 10 passenger seats  
    75 percent of these small airplanes . . . . . 2480 feet  
    95 percent of these small airplanes . . . . . 3030 feet  
    100 percent of these small airplanes . . . . . 3600 feet  
Small airplanes with 10 or more passenger seats . . . . . 4160 feet  
  
Large airplanes of 60,000 pounds or less  
    75 percent of these large airplanes at 60 percent useful load . . . . . 5310 feet  
    75 percent of these large airplanes at 90 percent useful load . . . . . 7000 feet  
    100 percent of these large airplanes at 60 percent useful load . . . . . 5500 feet  
    100 percent of these large airplanes at 90 percent useful load . . . . . 7730 feet  
  
Airplanes of more than 60,000 pounds . . . . . Approximately 5070 feet

REFERENCE: Chapter 2 of AC 150/5325-4A, Runway Length Requirements  
for Airport Design, no Changes included.

DECLARED DISTANCE LENGTHS (feet)

Aircraft Approach Category C  
 Airplane Design Group II  
 Runway 22 approach visibility minimums are not lower than CAT I  
 Runway 4 approach visibility minimums are not lower than 1 mile  
 Airport elevation . . . . . 163 feet

Runway 22 and 4

Runway length . . . . .	5420	5420
Stopway length . . . . .	0	1000
Clearway length . . . . .	0	0
Runway safety area length beyond the stop end of runway . . . . .	1000	1000
Runway object free area length beyond the stop end of runway . . . . .	1000	1000

The following distances are positive in the direction of aircraft operations and negative in the opposite direction:

Distance from:

the departure end of runway to the beginning of clearway . . . . .	0	0
the departure end of runway to the beginning of departure RPZ . . . . .	200	200
the approach end of runway to the start of takeoff . . . . .	0	0
the approach end of runway to the threshold . . . . .	0	0
the end of approach RPZ to the approach end of runway . . . . .	200	200

The following lengths are standard RSA and ROFA lengths:

Runway safety area length to be provided:

beyond the stop end of ASDA . . . . .	1000	1000
beyond the stop end of LDA . . . . .	1000	1000
before the approach end of LDA . . . . .	1000	1000

Runway object free area length to be provided:

beyond the stop end of ASDA . . . . .	1000	1000
beyond the stop end of LDA . . . . .	1000	1000
before the approach end of LDA . . . . .	1000	1000

The following declared distances are for Approach Category C and D airplanes.

	Runway 22 (feet)	Runway 4 (feet)
Takeoff run available (TORA)	5420	5420
Takeoff distance available (TODA)	5420	5420
Accelerate-stop distance available (ASDA)	5420	5420
Landing distance available (LDA)	5420	5420
Usable stopway length	0	0
Distance from the stop end of LDA to runway end	0	0
Distance from the departure end of TORA to RPZ	200	200
Distance from the approach RPZ to the threshold	200	200

REFERENCE: Appendix 14 of AC 150/5300-13, Airport Design, including Changes 1 through 4.

RWY 4/22 (MMV)  
AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category D or E	
Airplane Design Group II	
Airplane wingspan . . . . .	78.99 feet
Primary runway end approach visibility minimums are not lower than CAT I	
Other runway end approach visibility minimums are not lower than 1 mile	
Airplane undercarriage width (1.15 x main gear track) . . .	14.95 feet
Airport elevation . . . . .	163 feet
Airplane tail height . . . . .	15.00 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

Airplane Group/ARC

Runway centerline to parallel runway centerline simultaneous operations  
when wake turbulence is not treated as a factor:

VFR operations with no intervening taxiway . . . . .	700 feet
VFR operations with one intervening taxiway . . . . .	800 feet
VFR operations with two intervening taxiways . . . . .	905 feet
IFR approach and departure with approach to near threshold	2500 feet less
100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.	

Runway centerline to parallel runway centerline simultaneous operations  
when wake turbulence is treated as a factor:

VFR operations . . . . .	2500 feet
IFR departures . . . . .	2500 feet
IFR approach and departure with approach to near threshold . .	2500 feet
IFR approach and departure with approach to far threshold	2500 feet plus
100 feet for each 500 feet of threshold stagger.	
IFR approaches . . . . .	3400 feet

Runway centerline to parallel taxiway/taxilane centerline . 289.5	400 feet
Runway centerline to edge of aircraft parking . . . . . 400.0	500 feet
Runway width . . . . .	100 feet
Runway shoulder width . . . . .	10 feet
Runway blast pad width . . . . .	120 feet
Runway blast pad length . . . . .	150 feet
Runway safety area width . . . . .	500 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater . . . . .	1000 feet
Runway object free area width . . . . .	800 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater . . . . .	1000 feet
Clearway width . . . . .	500 feet
Stopway width . . . . .	100 feet

Obstacle free zone (OFZ):

Runway OFZ width . . . . .	400 feet
Runway OFZ length beyond each runway end . . . . .	200 feet
Inner-approach OFZ width . . . . .	400 feet
Inner-approach OFZ length beyond approach light system . . . .	200 feet
Inner-approach OFZ slope from 200 feet beyond threshold . . .	50:1
Inner-transitional OFZ height H . . . . . 53.1	53.1 feet

Inner-transitional OFZ slope . . . . . 6:1

Runway protection zone at the primary runway end:

Width 200 feet from runway end . . . . . 1000 feet  
Width 2700 feet from runway end . . . . . 1750 feet  
Length . . . . . 2500 feet

Runway protection zone at other runway end:

Width 200 feet from runway end . . . . . 500 feet  
Width 1900 feet from runway end . . . . . 1010 feet  
Length . . . . . 1700 feet

Departure runway protection zone:

Width 200 feet from the far end of TORA . . . . . 500 feet  
Width 1900 feet from the far end of TORA . . . . . 1010 feet  
Length . . . . . 1700 feet

Threshold surface at primary runway end:

Distance out from threshold to start of surface . . . . . 200 feet  
Width of surface at start of trapezoidal section . . . . . 1000 feet  
Width of surface at end of trapezoidal section . . . . . 4000 feet  
Length of trapezoidal section . . . . . 10000 feet  
Length of rectangular section . . . . . 0 feet  
Slope of surface . . . . . 34:1

Threshold surface at other runway end:

Distance out from threshold to start of surface . . . . . 0 feet  
Width of surface at start of trapezoidal section . . . . . 400 feet  
Width of surface at end of trapezoidal section . . . . . 1000 feet  
Length of trapezoidal section . . . . . 1500 feet  
Length of rectangular section . . . . . 8500 feet  
Slope of surface . . . . . 20:1

Taxiway centerline to parallel taxiway/taxilane centerline 104.8 105 feet  
Taxiway centerline to fixed or movable object . . . . . 65.3 65.5 feet  
Taxilane centerline to parallel taxilane centerline . . . . . 96.9 97 feet  
Taxilane centerline to fixed or movable object . . . . . 57.4 57.5 feet  
Taxiway width . . . . . 30.0 35 feet  
Taxiway shoulder width . . . . . 10 feet  
Taxiway safety area width . . . . . 79.0 79 feet  
Taxiway object free area width . . . . . 130.6 131 feet  
Taxilane object free area width . . . . . 114.8 115 feet  
Taxiway edge safety margin . . . . . 7.5 feet  
Taxiway wingtip clearance . . . . . 25.8 26 feet  
Taxilane wingtip clearance . . . . . 17.9 18 feet

REFERENCE: AC 150/5300-13, Airport Design, including Changes 1 through 4.

RWY 17/35 (MMV)  
AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category B  
 Airplane Design Group II  
 Airplane wingspan . . . . . 78.99 feet  
 Primary runway end approach visibility minimums are not lower than 1 mile  
 Other runway end approach visibility minimums are not lower than 1 mile  
 Airplane undercarriage width (1.15 x main gear track) . . . 14.95 feet  
 Airport elevation . . . . . 163 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

Airplane Group/ARC

Runway centerline to parallel runway centerline simultaneous operations  
 when wake turbulence is not treated as a factor:

VFR operations with no intervening taxiway . . . . . 700 feet  
 VFR operations with one intervening taxiway . . . . . 700 feet  
 VFR operations with two intervening taxiways . . . . . 700 feet  
 IFR approach and departure with approach to near threshold 2500 feet less  
 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.

Runway centerline to parallel runway centerline simultaneous operations  
 when wake turbulence is treated as a factor:

VFR operations . . . . . 2500 feet  
 IFR departures . . . . . 2500 feet  
 IFR approach and departure with approach to near threshold . . 2500 feet  
 IFR approach and departure with approach to far threshold 2500 feet plus  
 100 feet for each 500 feet of threshold stagger.  
 IFR approaches . . . . . 3400 feet

Runway centerline to parallel taxiway/taxilane centerline . 239.5 240 feet  
 Runway centerline to edge of aircraft parking . . . . . 250.0 250 feet  
 Runway width . . . . . 75 feet  
 Runway shoulder width . . . . . 10 feet  
 Runway blast pad width . . . . . 95 feet  
 Runway blast pad length . . . . . 150 feet  
 Runway safety area width . . . . . 150 feet  
 Runway safety area length beyond each runway end  
 or stopway end, whichever is greater . . . . . 300 feet  
 Runway object free area width . . . . . 500 feet  
 Runway object free area length beyond each runway end  
 or stopway end, whichever is greater . . . . . 300 feet  
 Clearway width . . . . . 500 feet  
 Stopway width . . . . . 75 feet

Obstacle free zone (OFZ):

Runway OFZ width . . . . . 400 feet  
 Runway OFZ length beyond each runway end . . . . . 200 feet  
 Inner-approach OFZ width . . . . . 400 feet  
 Inner-approach OFZ length beyond approach light system . . . . 200 feet  
 Inner-approach OFZ slope from 200 feet beyond threshold . . . 50:1  
 Inner-transitional OFZ slope . . . . . 0:1

Runway protection zone at the primary runway end:

Width 200 feet from runway end . . . . .	500 feet
Width 1200 feet from runway end . . . . .	700 feet
Length . . . . .	1000 feet

Runway protection zone at other runway end:

Width 200 feet from runway end . . . . .	500 feet
Width 1200 feet from runway end . . . . .	700 feet
Length . . . . .	1000 feet

Departure runway protection zone:

Width 200 feet from the far end of TORA . . . . .	500 feet
Width 1200 feet from the far end of TORA . . . . .	700 feet
Length . . . . .	1000 feet

Threshold surface at primary runway end:

Distance out from threshold to start of surface . . . . .	0 feet
Width of surface at start of trapezoidal section . . . . .	400 feet
Width of surface at end of trapezoidal section . . . . .	1000 feet
Length of trapezoidal section . . . . .	1500 feet
Length of rectangular section . . . . .	8500 feet
Slope of surface . . . . .	20:1

Threshold surface at other runway end:

Distance out from threshold to start of surface . . . . .	0 feet
Width of surface at start of trapezoidal section . . . . .	400 feet
Width of surface at end of trapezoidal section . . . . .	1000 feet
Length of trapezoidal section . . . . .	1500 feet
Length of rectangular section . . . . .	8500 feet
Slope of surface . . . . .	20:1

Taxiway centerline to parallel taxiway/taxilane centerline	104.8	105 feet
Taxiway centerline to fixed or movable object . . . . .	65.3	65.5 feet
Taxilane centerline to parallel taxilane centerline . . . . .	96.9	97 feet
Taxilane centerline to fixed or movable object . . . . .	57.4	57.5 feet
Taxiway width . . . . .	30.0	35 feet
Taxiway shoulder width . . . . .		10 feet
Taxiway safety area width . . . . .	79.0	79 feet
Taxiway object free area width . . . . .	130.6	131 feet
Taxilane object free area width . . . . .	114.8	115 feet
Taxiway edge safety margin . . . . .		7.5 feet
Taxiway wingtip clearance . . . . .	25.8	26 feet
Taxilane wingtip clearance . . . . .	17.9	18 feet

REFERENCE: AC 150/5300-13, Airport Design, including Changes 1 through 4.