

RUNWAY DATA TABLE										
	RUNWAY 9/27				RUNWAY 3/21					
	EXIST. RW 9	EXIST. RW 27	FUT. / ULT. RW 9	FUT. / ULT. RW 27	EXIST. RW 3	EXIST. RW 21	FUT. RW 3	FUT. RW 21	ULT. RW 3	ULT. RW 21
RUNWAY LENGTH x WIDTH	10,591' x 150'				5,719' x 150' (60' WIDE FOR B-I)		SAME		8,000' x 150' (60' WIDE FOR B-I)	
RUNWAY SHOULDER WIDTH	35' PER SIDE (20' STANDARD FOR C-III)				35' PER SIDE (PARTIAL) (10' Standard for B-I)		25' PER SIDE (10' STANDARD FOR B-I)		SAME	
RUNWAY BLAST PAD WIDTH	220' WIDE (140' STANDARD FOR C-III)	220' WIDE (140' STANDARD FOR C-III)	SAME		N/A	N/A	200' WIDE (80' STANDARD FOR B-I)		SAME	
RUNWAY BLAST PAD LENGTH	400' BEYOND (200' STANDARD FOR C-III)	400' BEYOND (200' STANDARD FOR C-III)	SAME		N/A	N/A	200' BEYOND (100' STANDARD FOR B-I)		SAME	
RUNWAY DESIGN CODE (SEE NOTES)	D/VI/1200 ¹				C/III/5000 ²		SAME ²		SAME ²	
RUNWAY DESIGN AIRCRAFT (SEE NOTES)	D-V WIDEBODY JET (B747 / B777 / A340) ¹				C-III NARROWBODY (B737 / A319 / A320) ²		SAME ²		SAME ²	
CRITICAL AIRCRAFT (CIVILIAN TYPE)	C-III NARROWBODY JET (B737 / A319 / A320)				B-I LARGE (BEECHJET 400)		SAME		SAME	
CRITICAL AIRCRAFT (MILITARY TYPE)	D-I F-16 FALCON FIGHTER JET				N/A		SAME		D-I F-16 FALCON FIGHTER JET	
APPROACH REFERENCE CODE	D/VI/1200	D/VI/2400	SAME	SAME	B/III/4000	B/III/4000	D/IV/4000	D/IV/4000	D/IV/4000	D/IV/4000
DEPARTURE REFERENCE CODE	D/VI	D/VI	SAME	SAME	B/I	B/I	D/IV, D/V	D/IV, D/V	D/IV, D/V	D/IV, D/V
RUNWAY BEARING (TRUE)	S 92° 15' 20.8760" E				N 31° 32' 51.1159" E		SAME		SAME	
PAVEMENT STRENGTH (LBS.)	94,000 (SWG) 180,000 (DWG) 650,000 (DTWG)				52,000 (SWG) 100,000 (DWG) 361,000 (DTWG)		SAME		SAME	
PAVEMENT CLASSIFICATION NUMBER (PCN)	75/R/C/W/U				45/F/B/X/T		SAME		SAME	
PAVEMENT MATERIAL (TREATMENT)	CONCRETE (GROOVED)				ASPHALT (GROOVED)		SAME		ASPHALT OR CONCRETE (GROOVED) ²	
EFFECTIVE GRADIENT (%)	0.08%				0.17%		SAME		SAME	
RUNWAY END ELEVATION (MSL)	1,427.8'	1,419.4'	SAME	SAME	1,413.7'	1,416.0'	SAME	SAME	SAME	SAME
DISPLACED THRESHOLD DISTANCE	N/A	533'	SAME	SAME	N/A	N/A	SAME	SAME	SAME	SAME
DISPLACED THRESHOLD LATITUDE (NAD83)	N/A	46° 50' 28.9038" N	SAME	SAME	N/A	N/A	SAME	SAME	SAME	SAME
DISPLACED THRESHOLD LONGITUDE (NAD83)	N/A	92° 10' 48.4254" W	SAME	SAME	N/A	N/A	SAME	SAME	SAME	SAME
DISPLACED THRESHOLD ELEVATION (MSL)	N/A	1,418.9'	SAME	SAME	N/A	N/A	SAME	SAME	SAME	SAME
RUNWAY INSTRUMENT APPROACH AIDS	ILS LOC RNAV (GPS) TACAN	ILS LOC RNAV (GPS) TACAN	SAME	SAME	VORTAC RNAV (GPS)	VORTAC RNAV (GPS)	SAME	SAME	SAME	SAME
ARRESTING GEAR SYSTEM	±1,500' BEYOND RW END	±2,100' BEYOND RW END	SAME	SAME	N/A	N/A	SAME	SAME	±2,000' BEYOND RW END	±2,000' BEYOND RW END
LAND AND HOLD SHORT (LAHSO)	8,950'	N/A	SAME	SAME	N/A	N/A	SAME	SAME	SAME	SAME
INSTRUMENT APPROACH MINIMUMS (LOWEST)	1,200' RVR / 100'	2,400' RVR / 200'	SAME	SAME	1-MILE / ±400	1-MILE / ±288	SAME	SAME	SAME	SAME
AERONAUTICAL SURVEY REQUIRED	VERTICALLY GUIDED				VERTICALLY GUIDED		SAME		SAME	
DEPARTURE SURFACE	YES	YES	SAME	SAME	YES	YES	SAME	SAME	SAME	SAME
PART 77 APPROACH USE TYPE	PRECISION (PI)				NON-PRECISION (NPI)		SAME		SAME	
VISUAL APPROACH AIDS	ALSF-2 (FAA) PAPI-4L (DAA) TDZL (FAA)	MALSR (FAA) PAPI-4L (DAA)	SAME	SAME	REIL (DAA) PAPI-4L (FAA)	REIL (DAA) PAPI-4L (FAA)	SAME	SAME	MALSR	SAME
RUNWAY LIGHTING	HIRL (CENTERLINE)				MIRL		SAME		SAME	
RUNWAY MARKING	PRECISION (PI)				NON-PRECISION (NPI)		SAME		SAME	
RUNWAY TO TAXIWAY CENTERLINE	500' TO 840' (450' STANDARD)				270' TO 400' (400' STANDARD)		400'		SAME	
RUNWAY HOLDLINE CENTERLINE DISTANCE	300' (294' STANDARD)				250'		264'		SAME	

ABBREVIATIONS: (S) - SURVEYED | (EST.) - ESTIMATED | (SWG) - SINGLE WHEEL GEAR AIRCRAFT | (DWG) - DUAL WHEEL GEAR AIRCRAFT | (DTWG) - DUAL TANDEM WHEEL GEAR AIRCRAFT

NOTE 1: THE CRITICAL AIRCRAFT DESIGN CODE FOR RUNWAY 9/27 IS C-II. DUE TO OPERATIONS BY AIRCRAFT LARGER THAN C-II AND THE 148TH AIR NATIONAL GUARD, THE RUNWAY IS UTILIZED BY MORE DEMANDING AIRCRAFT AND IS DESIGNED TO D-V STANDARDS.

NOTE 2: RUNWAY 3/21 IS CURRENTLY DESIGNED TO C-III STANDARDS AND SERVES GA, MILITARY AND AIR CARRIER AIRCRAFT. THE CRITICAL AIRCRAFT IS B-I. AN ELIGIBILITY DETERMINATION WILL BE REQUIRED PRIOR TO FUTURE RUNWAY RECONSTRUCTION OR IMPROVEMENTS.

NOTE 3: PAVEMENT DESIGN TO DETERMINE ULTIMATE RUNWAY PAVEMENT TYPE.

NOTE 4: WHERE THE EXISTING CONDITION EXCEEDS THE STANDARD, THE STANDARD IS PROVIDED IN PARENTHESIS.

RUNWAY SAFETY / PROTECTION AREAS				
RUNWAY	SURFACE	WIDTH	LENGTH BEYOND RUNWAY ENDS	LENGTH PRIOR TO THRESHOLD
EXIST. / FUT. / ULT. RUNWAY 9/27	RUNWAY SAFETY AREA (RSA)	500'	1,000'	1,000'
	RUNWAY OBSTACLE FREE ZONE (OFZ)	400'	200'	200'
	PRECISION OBSTACLE FREE ZONE (POFZ)	800'	200'	200'
EXIST. / FUT. / ULT. RUNWAY 3/21	RUNWAY SAFETY AREA (RSA)	500'	1,000'	1,000'
	RUNWAY OBSTACLE FREE ZONE (OFZ)	400'	200'	200'
	RUNWAY OBSTACLE FREE AREA (OFA)	800'	1,000'	1,000'

RUNWAY END COORDINATES				
POINT	EXISTING	FUTURE	ULTIMATE	
RUNWAY 9	LAT. 46° 50' 32.84" N	SAME	SAME	
	LONG. 92° 13' 13.04" W	SAME	SAME	
RUNWAY 27	LAT. 46° 50' 28.70" N	SAME	SAME	
	LONG. 92° 10' 40.82" W	SAME	SAME	
RUNWAY 3	LAT. 46° 50' 08.67" N	SAME	SAME	
	LONG. 92° 11' 17.77" W	SAME	SAME	
RUNWAY 21	LAT. 46° 50' 56.77" N	SAME	46° 51' 15.97" N	
	LONG. 92° 10' 34.72" W	SAME	92° 10' 17.60" W	

RUNWAY END PROTECTION AREAS					
RUNWAY	SURFACE	BASE	LENGTH	OUTER WIDTH	SLOPE
EXIST. / FUT. / ULT. RUNWAY 9/27	FAA APPROACH RUNWAY PROTECTION ZONE (RPZ)	1,000'	2,500'	1,750'	N/A
	MnDOT CLEAR ZONE	1,000'	2,500'	1,750'	50:1
	PART 77 APPROACH SURFACE	1,000'	50,000'	16,000'	50:1 / 40:1
	TERPS APPROACH SURFACE 5 (AC 150/5300-13B, TABLE 3-4)	400'	10,000'	3,400'	34:1
	TERPS APPROACH SURFACE 6 (AC 150/5300-13B, TABLE 3-4)	350'	10,200'	1,520'	30:1
EXIST. / FUT. / ULT. RUNWAY 3/21	FAA APPROACH RUNWAY PROTECTION ZONE (RPZ)	500'	1,700'	1,010'	N/A
	MnDOT CLEAR ZONE	500'	1,700'	1,010'	34:1
	PART 77 APPROACH SURFACE	500'	10,000'	3,500'	34:1
	TERPS APPROACH SURFACE 5 (AC 150/5300-13B, TABLE 3-4)	400'	10,000'	3,400'	20:1
	TERPS APPROACH SURFACE 6 (AC 150/5300-13B, TABLE 3-4)	350'	10,200'	1,520'	30:1
TERPS DEPARTURE SURFACE 7 (AC 150/5300-13B, TABLE 3-5)	1,000'	12,152'	7,512'	40:1	

NAVAID / COMMUNICATION EQUIPMENT DATA TABLE				
EQUIPMENT	LATITUDE	LONGITUDE	TOP ELEVATION (MSL)	OWNER
AUTOMATED SURFACE OBSERVING SYSTEM (ASOS)	46° 50' 36.49" N	92° 11' 11.55" W	1,427.8'	NWS
BEACON	46° 50' 16.85" N	92° 11' 36.93" W	1,478.6'	DAA
RVR	46° 50' 31.49" N	92° 11' 37.10" W	1,428'	FAA
AIRPORT SURVEILLANCE RADAR (ASR)	46° 50' 45.01" N	92° 11' 57.04" W	1,422.0'	FAA
VORTAC STATION	46° 48' 07.79" N	92° 12' 10.33" W	1,427.9'	FAA
TACAN STATION	46° 50' 37.86" N	92° 11' 09.41" W	1,423.6'	MNANG
RW 9 ILS GLIDESLOPE ANTENNA	46° 50' 36.33" N	92° 12' 56.30" W	1,414.9'	FAA
RW 9 ILS LOCALIZER ANTENNA	46° 50' 27.58" N	92° 10' 00.11" W	1,391.2'	FAA
RW 27 ILS GLIDESLOPE ANTENNA (EXIST.)	46° 50' 33.18" N	92° 11' 09.68" W	1,423.4'	FAA
RW 27 ILS GLIDESLOPE ANTENNA (FUT.)	46° 50' 33.12" N	92° 11' 04.36" W	1,424' (EST.)	FAA
RW 27 ILS LOCALIZER ANTENNA	46° 50' 33.41" N	92° 13' 34.27" W	1,438.3'	FAA
RW 9 PAPI-4L	46° 50' 33.99" N	92° 12' 52.18" W	1,420.0'	DAA
RW 27 PAPI-4L	46° 50' 27.87" N	92° 11' 12.85" W	1,420.0'	DAA
RW 3 PAPI-4L	46° 50' 15.84" N	92° 11' 14.23" W	1,409.3'	FAA
RW 21 PAPI-4L	46° 50' 50.01" N	92° 10' 37.90" W	1,414.4'	FAA

NOTE: VORTAC STATION LOCATED ± 3 MILES SOUTH OF AIRPORT

TOUCHDOWN ZONE (TDZ) LIMITS				
RUNWAY	TDZ LIMITS	STA.	ELEV.	
EXIST. / FUT. RUNWAY 9	100+00 - 130+00	100+00	1,427.7'	
EXIST. / FUT. RUNWAY 27	175+91 - 205+91	185+60.8	1,420.9'	
EXIST. / ULT. RUNWAY 3	100+00 - 130+00	128+59.5	1,420.0'	
EXIST. RUNWAY 21	127+19 - 157+19	128+59.5	1,420.0'	
ULT. RUNWAY 21	150+00 - 180+00	157+19.0	1,416.0'	
EXIST. / FUT. RUNWAY 9/27 HIGH POINT	N/A	100+00	1,427.7'	
EXIST. / FUT. RUNWAY 9/27 LOW POINT	N/A	126+39.9	1,418.7'	
EXIST. / ULT. RUNWAY 3/21 HIGH POINT	N/A	128+59.5	1,420.0'	
EXIST. / ULT. RUNWAY 3/21 LOW POINT	N/A	102+61.1	1,410.0'	

TAXIWAY DATA TABLE														
EXISTING TAXIWAY NAME	FUTURE / ULTIMATE TAXIWAY NAME	EXISTING (E) / FUTURE (F) / ULTIMATE (U)	ADG	TDG	WIDTH	SHOULDER	TESM	TSA	TOFA	LIGHTING	OBJECTS INSIDE TSA OR TOFA	SEPARATION FROM TWY CL TO FIXED/MOVEABLE OBJ.	SEPARATION FROM TWY CL TO RUNWAY CL	RUNWAY CL TO HOLD LINE
TAXIWAY A	SAME	E	V	5	75'	35' (PARTIAL)	14'	214'	285'	MITL	NO	142.5'	837' (EAST END) 512' (WEST END)	300'
TAXIWAY A1	SAME	F	V	5	75'	25'	14'	214'	285'	MITL	NO	142.5'	837' (EAST END) 512' (WEST END)	300'
TAXIWAY A2	SAME	F/U	V	5	75'	25'	14'	214'	285'	MITL	NO	142.5'	N/A	300'
TAXIWAY A3	SAME	E	V	5	100'	35' (PARTIAL)	14'	214'	285'	MITL	NO	142.5'	N/A	300'
TAXIWAY A4	SAME	F/U	V	5	75'	25'	14'	214'	285'	MITL	NO	142.5'	N/A	300'
TAXIWAY A5	SAME	E/F/U	V	5	75'	30'	14'	214'	285'	MITL	NO	142.5'	N/A	300'
TAXIWAY B	SAME	E/F	V	5	75'	35'	14'	214'	285'	MITL	NO	142.5'	584'	300'
TAXIWAY C	SAME	U	V	5	75'	30'	14'	214'	285'	MITL	NO	142.5'	584'	300'
TAXIWAY C1	TAXIWAY C3 (U)	E	III	3	50'	35' (PARTIAL)	10'	118'	171'	MITL	NO	85.5'	270' TO 400' (STANDARD)	245 TO 250'
TAXIWAY C2	TAXIWAY C4 (U)	F/U	III	3	50'	20'	10'	118'	171'	MITL	NO	85.5'	400'	264'
TAXIWAY C3	TAXIWAY C5 (U)	E	III	3	50'	NONE	10'	118'	171'	MITL	NO	85.5'	N/A	250'
TAXIWAY C4	TAXIWAY C6 (U)	F/U	III	3	50'	20'	10'	118'	171'	MITL	NO	85.5'	N/A	264'
TAXIWAY D	SAME	U	III	3	50'	20'	10'	118'	171'	MITL	NO	85.5'	N/A	264'
TAXIWAY D1	TAXIWAY D1 (U)	E	III	3	50'	NONE	14'	214'	285'	MITL	NO	85.5'	511'	260'
TAXIWAY D2	TAXIWAY D2 (U)	F	III	3	50'	20'	10'	118'	171'	MITL	NO	85.5'	400'	264'
TAXIWAY D3	TAXIWAY D3 (U)	U	V	5	75'	25'	14'	214'	285'	MITL	NO	142.5'	N/A	264'
TAXIWAY D4	TAXIWAY D4 (U)	U	V	5	75'	25'	14'	214'	285'	MITL	NO	142.5'	511'	264'
TAXIWAY D5	TAXIWAY D5 (U)	U	V	5	75'	25'	14'	214'	285'	MITL	NO	142.5'	511'	264'
TAXIWAY E	TAXIWAY E1 (F)	E/F	V	5	150'	35'	14'	214'	285'	MITL	NO	142.5'	N/A	N/A
TAXIWAY F	SAME	F	V	5	150'	25'	14'	214'	285'	MITL	NO	142.5'	N/A	N/A
TAXILANE G	SAME	E	V	5	75'	NONE	14'	214'	285'	MITL	NO	142.5'	N/A	230'
TAXIWAY H	SAME	E	III	3	50'	NONE	10'	118'	158'	NONE	NO	85.5'	N/A	N/A
TAXIWAY G	SAME	E	V	5	75'	35' (PARTIAL)	15'	214'	285'	MITL	NO	142.5'	N/A	264**

* THIS NUMBER REPRESENTS THE MINIMUM RUNWAY CENTERLINE-TO-HOLD LINE DISTANCE. ACTUAL DIMENSIONS ARE PROVIDED ON SHEET 5.

AIRPORT DATA			
ITEM	EXISTING	FUTURE	ULTIMATE
DESIGN AIRPORT REFERENCE CODE (ARC)	D-V	SAME	SAME
MEAN MAX. TEMP OF HOTTEST MONTH	76.3° (JULY)	N/A	N/A
AIRPORT ELEVATION (NAVD88)	1,427.8'	SAME	SAME
AIRPORT REFERENCE POINT (LATITUDE)	46° 50' 31.45" N	SAME	46° 50' 35.73" N
(LONGITUDE)	92° 11' 35.65" W	SAME	92° 11' 27.12" W
NPIAS ROLE	NON-HUB PRIMARY	SAME	SAME
MnDOT SASP CLASSIFICATION	KEY AIRPORT	SAME	SAME

SOURCE: NOAA CLIMATIC DATA CENTER, DULUTH INTERNATIONAL AIRPORT STATION (2009-2018).

CRITICAL AIRCRAFT DATA		
	RUNWAY 9/27	RUNWAY 3/21
CRITICAL AIRCRAFT RUNWAY DESIGN CODE (RDC)	C-III	B-I ¹
CRITICAL AIRCRAFT TAXIWAY DESIGN CODE (TDG)	TDG 3	TDG 1A ¹
REPRESENTATIVE AIRCRAFT	AIRBUS A319	BEECHJET 400 ¹