RUNWAY END COORDINATES - NAD 83

	RUNWAY 1		RUNWAY 19		RUNWAY 13		RUNWAY 31	
	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE
LATITUDE	41°58'57.72" N	41°58'57.72" N	41°59'51.69" N	41°59'51.69" N	41°59'54.67" N	41°59'54.67" N	41°59'26.76" N	41°59'26.14370" N
LONGITUDE	93°37'29.12" W	93°37'29.12" W	93°37'07.56" W	93°37'07.56" W	93°37'34.91" W	93°37'34.91" W	93°37'02.90" W	93°36'58.25382" W

RUNWAY DATA TABLE

ITEM	RUNWAY 1/19 EXISTING		RUNWAY 1/19 ULTIMATE		RUNWAY 13/31 EXISTING		RUNWAY 13/31 ULTIMATE	
APPROACH CATEGORY - DESIGN GROUP	C-II		C-II		B-II		B-II	
RUNWAY LENGTH x WIDTH	5701'x100'		5701'x100'		3491'x75'		4000'x75'	
MAXIMUM ELEVATION ABOVE MSL	955.3'		955.3'		929.6'		929.6'	
RUNWAY MARKINGS	PIR/NPI		PIR/NPI		NPI		NPI	
RUNWAY LIGHTING	MIRL		MIRL		MIRL		MIRL	
PAVEMENT MATERIAL	ACC/PCC		ACC/PCC		ACC		PCC	
PAVEMENT STRENGTH	38,000 DW		38,000 DW		17,000 SW		12,500 SW	
RUNWAY SAFETY AREA (RSA) LENGTH	770'		770'		4093'		4600'	
RUNWAY SAFETY AREA (RSA) WIDTH	400'		400'		150'		150'	
RUNWAY OBJECT FREE AREA (ROFA) LENGTH	770'		770'		4093'		4600'	
RUNWAY OBJECT FREE AREA (ROFA) WIDTH	800'		800'		500'		500'	
RUNWAY OBSTACLE FREE ZONE (ROFZ) LENGTH	610'		610'		3893'		4400'	
RUNWAY OBSTACLE FREE ZONE (ROFZ) WIDTH	400'		400'		250'		250'	
TAXIWAY WIDTH	35'		35'		35'		35'	
TAXIWAY LIGHTING	MITL		MITL		MITL		MITL	
	1	19	1	19	13	31	13	31
APPROACH TYPE	PIR	NPI	PIR	NPI	NPI	NPI	NPI	NPI
APPROACH SURFACE SLOPE	40:1/50:1	34:1	40:1/50:1	34:1	20:1	20:1	20:1	20:1
PERCENT EFFECTIVE GRADIENT	-0.64%	+0.64%	-0.64%	+0.64%	-0.31%	+0.31%	-0.27%	+0.27%
ELECTRONIC AIDS	ILS, GPS	GPS	ILS	GPS	GPS	GPS, VOR	GPS	GPS, VOR
VISUAL APPROACH AIDS	MALSR	VASI	MALSR, PAPI	VASI	VASI	VASI	VASI	VASI
APPROACH VISIBILITY MINIMUMS	1/2 MILE	1-MILE	1/2 MILE	1-MILE	1-MILE	1-MILE	1-MILE	1-MILE
TOUCHDOWN ZONE ELEVATION	955.3'	937.0'	955.3'	937.0'	929.6'	929.6'	929.6'	929.6'
TAKEOFF RUN AVAILABLE (TORA)	5701'	5701'	5701'	5701'	3493'	3493'	4000'	4000'
TAKEOFF DISTANCE AVAILABLE (TODA)	5701'	5701'	5701'	5701'	3493'	3493'	4000'	4000'
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	5701'	5701'	5701'	5701'	3493'	3493'	4000'	4000'
LANDING DISTANCE AVAILABLE (LDA)	5701'	5701'	5701'	5701'	3493'	3493'	4000'	4000'

BUILDING IDENTIFICATION

I.D.	DESCRIPTION	I.D.	DESCRIPTION
A	EXISTING TERMINAL BUILDING	N	EXISTING CONVENTIONAL HANGAR
B	EXISTING FBO SHOP / STORAGE	A(2)	EXISTING AMES HANGAR CLUD
C	EXISTING FBO SHOP / STORAGE	B(2)	EXISTING AMES HANGAR CLUB
D	EXISTING TEE HANGAR	C(2)	EXISTING AMES HANGAR CLUB
E	EXISTING TEE HANGAR	O	EXISTING HANGAR
F	EXISTING TEE HANGAR	P	EXISTING MANUFACTURING FACILITY
G	EXISTING TEE HANGAR	1	ULTIMATE CONVENTIONAL HANGAR
H	EXISTING CONVENTIONAL HANGAR	2	ULTIMATE CONVENTIONAL HANGAR
I	EXISTING CONVENTIONAL HANGAR	3	ULTIMATE TERMINAL BUILDING
J	EXISTING CONVENTIONAL HANGAR	4	ULTIMATE CONVENTIONAL HANGAR
K	EXISTING CONVENTIONAL HANGAR	5	ULTIMATE CONVENTIONAL HANGAR
L	EXISTING CONVENTIONAL HANGAR	6	ULTIMATE CONVENTIONAL HANGAR
M	EXISTING CONVENTIONAL HANGAR		

SURVEY CONTROL AND RUNWAY DOCUMENTATION

PID	WGS84 COORDINATES (NAD83) DEGREES MINUTES SECONDS LATITUDE	LONGITUDE	NAVD 88 DATUM: US SURVEY FEET ELEVATION	DESCRIPTION
AJ8301	41°59'37.60859" N	93°37'05.65517" W	921.4	AT AMES ARP, 65.90M Az 261° FROM FE. COR. 45.50M Az 46° FROM ℄ PARALLEL TWY TO RW 13/31, 7.25M Az 183 FROM FIELD. 1M Az 226 FROM WITNESS POST. PUNCH MK SSTL ROD STAMP "AMW D 2000". PRIMARY ARP CONTROL.
AJ8302	41°59'13.14151 N	93°37'26.76926" W	941.2	AT AMES ARP, 71.65M Az 320° FROM EDGE RWY 1/19. 63.12M Az 55 FROM ℄ CROSS TWY TO RWY 1/19. 35.62M Az 140° FROM EDGE PARALLEL TWY. STD NGS DISC STAMP "AMW E 2000". SECONDARY ARP CONTROL.
AJ8303	41°59'55.26182"N	93°37'31.13490" W	921.9	AT AMES ARP, 29.54M Az 154° FROM TWY EDGE. 33.80M Az 116° FROM TWY EDGE AT ℄ OF HOLD LINE. 60.70M Az 53° EDGE RWY 13/33. STD NGS DISC STAMP "AMW F 2000". SECONDARY ARP CONTROL.

LEGEND

DESCRIPTION	EXISTING	ULTIMATE
AIRPORT PROPERTY LINE		
AIRPORT EASEMENT LINE		
BUILDING RESTRICTION LINE		
RUNWAY VISIBILITY ZONE / LINE OF SIGHT		
RUNWAY PROTECTION ZONE		
RUNWAY PROTECTION ZONE EASEMENT		
RUNWAY SAFETY AREA AND OBJECT FREE AREA		
BUILDING - STRUCTURES		
PRECISION APPROACH PATH INDICATOR (PAPI)		
RUNWAY END IDENTIFIER LIGHTS (REIL)		
THRESHOLD LIGHTS		
FENCE		
PAVEMENT REMOVAL		
TIEDOWN		

OBSTACLE FREE ZONE (OFZ) OBJECT PENETRATIONS

NO.	DESCRIPTION	(PENETRATION)	DISPOSITION
	NONE		

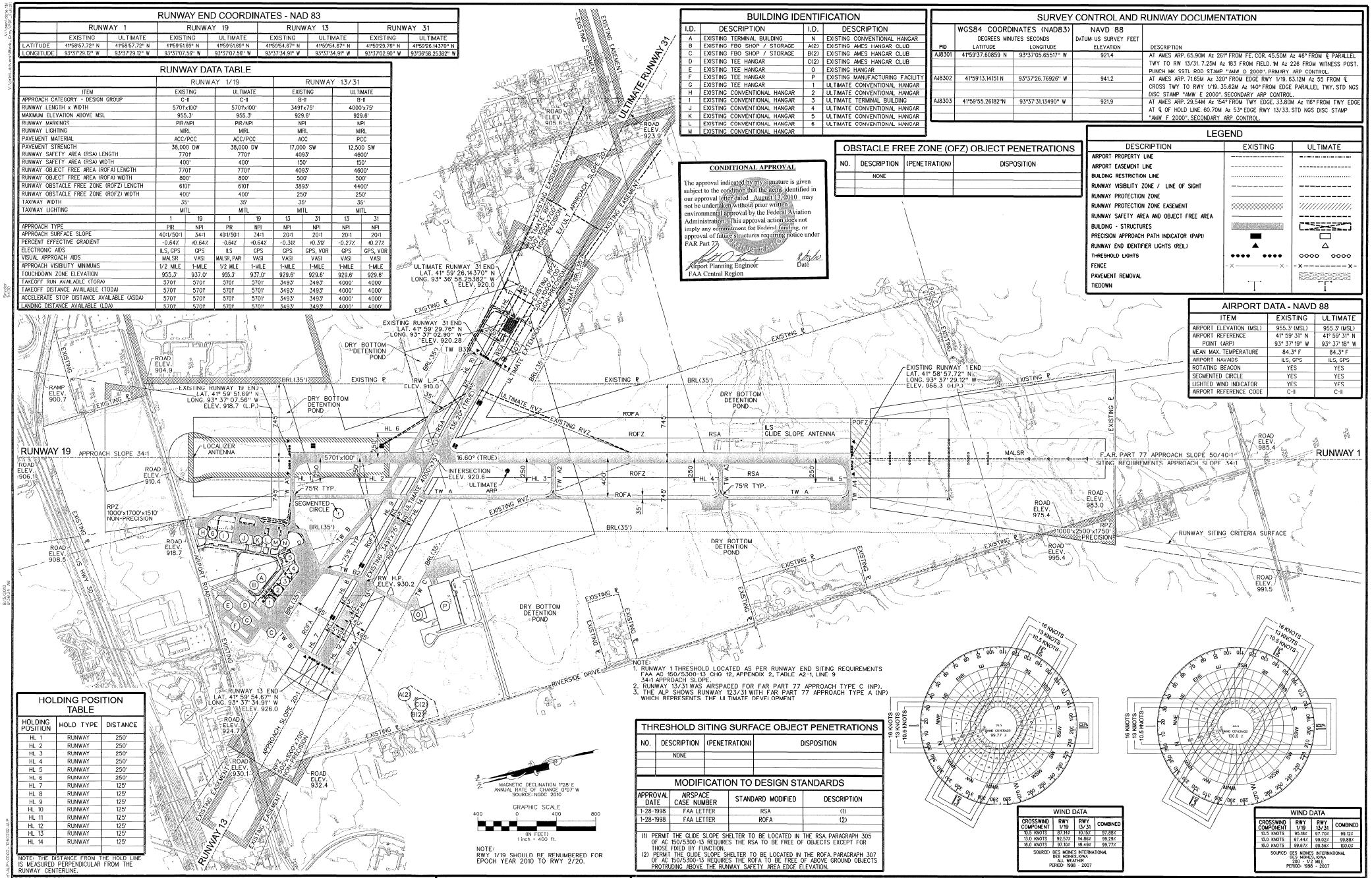
CONDITIONAL APPROVAL

The approval indicated by my signature is given subject to the condition that the items identified in our approval letter dated August 13, 2010 may not be undertaken without prior written environmental approval by the Federal Aviation Administration. This approval action does not imply any commitment for Federal funding, or approval of future structures requiring notice under FAR Part 77.

Airport Planning Engineer — Date
FAA Central Region

AIRPORT DATA - NAVD 88

ITEM	EXISTING	ULTIMATE
AIRPORT ELEVATION (MSL)	955.3' (MSL)	955.3' (MSL)
AIRPORT REFERENCE POINT (ARP)	41° 59' 31" N 93° 37' 19" W	41° 59' 31" N 93° 37' 18" W
MEAN MAX. TEMPERATURE	84.3° F	84.3° F
AIRPORT NAVAIDS	ILS, GPS	ILS, GPS
ROTATING BEACON	YES	YES
SEGMENTED CIRCLE	YES	YES
LIGHTED WIND INDICATOR	YES	YES
AIRPORT REFERENCE CODE	C-II	C-II



NOTE:
1. RUNWAY 1 THRESHOLD LOCATED AS PER RUNWAY END SITING REQUIREMENTS FAA AC 150/5300-13 CHG 12, APPENDIX 2, TABLE A2-1, LINE 9 34:1 APPROACH SLOPE.
2. RUNWAY 13/31 WAS AIRSPACED FOR FAR PART 77 APPROACH TYPE C (NP).
3. THE ALP SHOWS RUNWAY 123/31 WITH FAR PART 77 APPROACH TYPE A (NP) WHICH REPRESENTS THE ULTIMATE DEVELOPMENT

NOTE:
RWY 1/19 SHOULD BE RENUMBERED FOR EPOCH YEAR 2010 TO RWY 2/20.

HOLDING POSITION TABLE

HOLDING POSITION	HOLD TYPE	DISTANCE
HL 1	RUNWAY	250'
HL 2	RUNWAY	250'
HL 3	RUNWAY	250'
HL 4	RUNWAY	250'
HL 5	RUNWAY	250'
HL 6	RUNWAY	250'
HL 7	RUNWAY	125'
HL 8	RUNWAY	125'
HL 9	RUNWAY	125'
HL 10	RUNWAY	125'
HL 11	RUNWAY	125'
HL 12	RUNWAY	125'
HL 13	RUNWAY	125'
HL 14	RUNWAY	125'

NOTE: THE DISTANCE FROM THE HOLD LINE IS MEASURED PERPENDICULAR FROM THE RUNWAY CENTERLINE.

THRESHOLD SITING SURFACE OBJECT PENETRATIONS

NO.	DESCRIPTION	(PENETRATION)	DISPOSITION
	NONE		

MODIFICATION TO DESIGN STANDARDS

APPROVAL DATE	AIRSPACE CASE NUMBER	STANDARD MODIFIED	DESCRIPTION
1-28-1998	FAA LETTER	RSA	(1)
1-28-1998	FAA LETTER	ROFA	(2)

(1) PERMIT THE GLIDE SLOPE SHELTER TO BE LOCATED IN THE RSA PARAGRAPH 305 OF AC 150/5300-13 REQUIRES THE RSA TO BE FREE OF OBJECTS EXCEPT FOR THOSE FIXED BY FUNCTION.
(2) PERMIT THE GLIDE SLOPE SHELTER TO BE LOCATED IN THE ROFA PARAGRAPH 307 OF AC 150/5300-13 REQUIRES THE ROFA TO BE FREE OF ABOVE GROUND OBJECTS PROTRUDING ABOVE THE RUNWAY SAFETY AREA EDGE ELEVATION.

WIND DATA

CROSSWIND COMPONENT	RWY 1/19	RWY 13/31	COMBINED
10.5 KNOTS	87.14%	70.15%	97.88%
13.0 KNOTS	92.57%	74.86%	99.29%
16.0 KNOTS	97.10%	78.49%	99.77%

SOURCE: DES MOINES INTERNATIONAL
DES MOINES, IOWA
ALL WEATHER
PERIOD: 1998 - 2007

WIND DATA

CROSSWIND COMPONENT	RWY 1/19	RWY 13/31	COMBINED
10.5 KNOTS	95.18%	97.70%	99.12%
13.0 KNOTS	97.44%	99.02%	99.88%
16.0 KNOTS	99.67%	99.56%	100.00%

SOURCE: DES MOINES INTERNATIONAL
DES MOINES, IOWA
200 x 1/2 MILE
PERIOD: 1995 - 2007

REVISION BLOCK NUMBER	DATE	DESCRIPTION

APPROVED BY: JLS
DATE APPROVED: 8/9/2010

PROJECT: AMES MUNICIPAL AIRPORT
TITLE: AIRPORT LAYOUT PLAN

SNYDER & ASSOCIATES
2727 S.W. SNYDER BLVD. ANKENY, IOWA 50023 515-964-2020
AK-MATTS, IL 773-693-9300 CO-SLOTTE, IL 773-693-9300 MO-FULLER, MO 573-635-9300 KS-KEDAR, KS 913-631-2500

PLAN:	JLS
CK. BY:	JLS
DR. BY:	RRD
DATE:	12-2008
PROJECT NO.	106.0292
DWG. NO.	D-2982
SHEET	2 OF 17