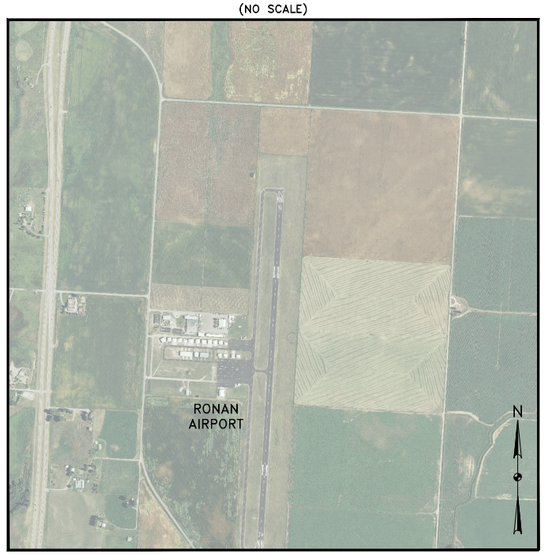
LOCATION MAP
(NO SCALE)



AIRPORT LAYOUT PLAN

FOR

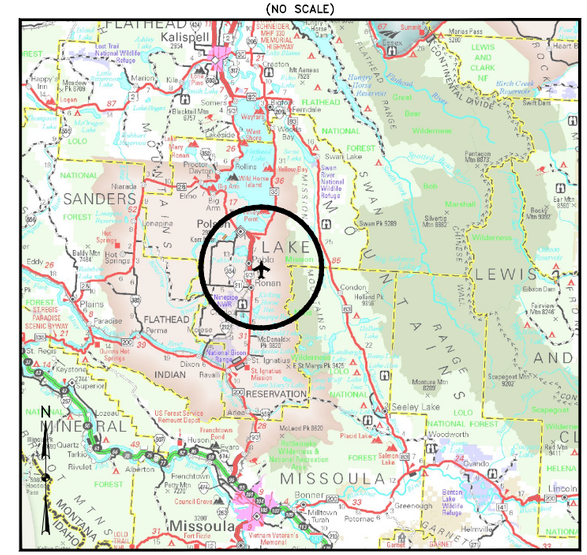
RONAN AIRPORT

RONAN, LAKE COUNTY, MONTANA

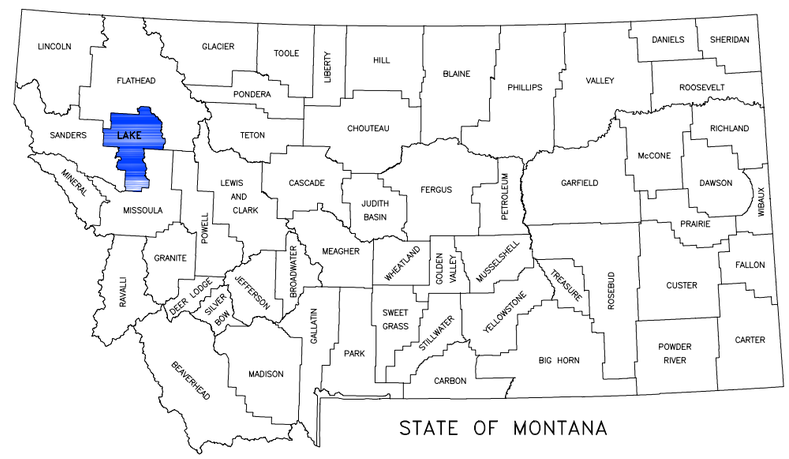
CITY OF RONAN AND LAKE COUNTY (OWNER)

April 2018

VICINITY MAP
(NO SCALE)

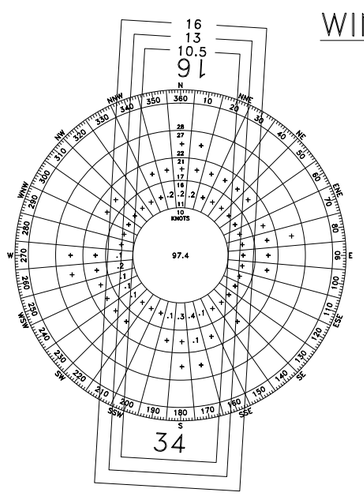


ON BEHALF OF THE CITY OF RONAN AND LAKE COUNTY, THIS AIRPORT LAYOUT PLAN (ALP) WAS PREPARED BY KLJ ACCORDING TO THE APPLICABLE ADVISORY CIRCULARS AT THE TIME OF SCOPING THE PROJECT, THE CURRENT VERSION OF THE ARP SOP 2.00 ALP CHECKLIST, AND ACCURATELY DEPICTS THE PROPOSED USE OF AIRSPACE AT THE TIME OF DATA COLLECTION. THE ALP CONFORMS WITH FAA DESIGN STANDARDS, EXCEPT AS NOTED.

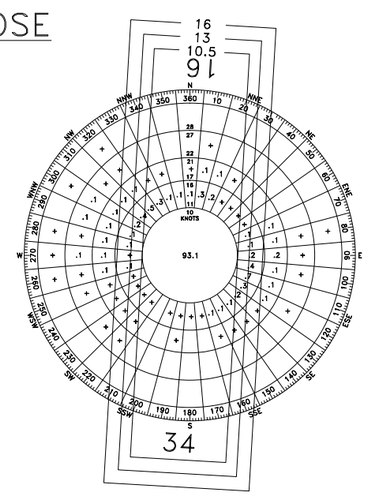


STATE OF MONTANA

WINDROSE



ALL WEATHER



IFR

ALL-WEATHER WIND COVERAGE			
CONFIGURATION	CROSSWIND COMPONENT		
	10.5 KNOTS	13 KNOTS	16 KNOTS
RUNWAY 16-34	99.33%	99.64%	99.94%
SOURCE: RONM8, RONAN RAWS STATION (2006-2015, HOURLY) FROM MESOWEST			
85,734 TOTAL OBSERVATIONS			

INSTRUMENT FLIGHT RULES (IFR) WIND COVERAGE			
CONFIGURATION	CROSSWIND COMPONENT		
	10.5 KNOTS	13 KNOTS	16 KNOTS
RUNWAY 16-34	95.79%	97.24%	98.63%
SOURCE: MISSOULA ASOS (2006-2015) FROM FAA AIRPORTS GIS			
15,596 TOTAL OBSERVATIONS			
IFR = VISIBILITY LOWER THAN 3 MILES OR CEILING LOWER THAN 1,000 FEET			

SHEET INDEX

A–1. TITLE SHEET
A–2. AIRPORT DATA SHEET
A–3. AIRPORT LAYOUT PLAN (EXISTING)
A–4. AIRPORT LAYOUT PLAN (FUTURE & ULTIMATE)
A–5. TERMINAL AREA (EXISTING)
A–6. TERMINAL AREA (FUTURE & ULTIMATE)
A–7. INNER PORTION OF THE APPROACH SURFACE – RUNWAY 16 END (EXISTING)
A–8. INNER PORTION OF THE APPROACH SURFACE – RUNWAY 34 END (EXISTING)
A–9. INNER PORTION OF THE APPROACH SURFACE – RUNWAY 16 END (FUTURE & ULTIMATE)
A–10. INNER PORTION OF THE APPROACH SURFACE – RUNWAY 34 END (FUTURE & ULTIMATE)
A–11. PART 77 AIRSPACE PLAN – (ULTIMATE)
A–12. RUNWAY DEPARTURE SURFACE
A–13. LAND USE PLAN

KLJ

PROJ. #21515106

RONAN AIRPORT
CITY OF RONAN AND LAKE COUNTY (OWNER)
RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

RONAN AIRPORT

TITLE SHEET

Rev.	Date	Description

DRAFTED MTK
REVIEWED BJM
PROJECT NUMBER 21515106
LAST REVISED DATE

SHEET **A-1**

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RUNWAY DATA TABLE

ITEM	PRIMARY RUNWAY 16/34 EXISTING (E)		FUTURE (F)		ULTIMATE (U)	
RUNWAY DESIGNATION	16	34	16	34	16	34
RUNWAY DESIGN CODE (RDC)	B-II(S)-5000	B-II(S)-5000	B-II-4000	B-II-5000	C-II-4000	C-II-5000
APPROACH REFERENCE CODE (APRC)	B-II-5000	B-II-5000	B-III-4000 D-II-4000	B-III-5000 D-II-5000	B-III-4000 D-II-4000	B-III-5000 D-II-5000
DEPARTURE REFERENCE CODE (DPRC)	B-II	B-II	B-III D-II	B-III D-II	B-III D-II	B-III D-II
RUNWAY DIMENSIONS	4795' x 75'		5100' x 75'		5500' x 100'	
RUNWAY LENGTH CRITERIA	SMALL, <10 PX (100% FLEET)		SMALL, <10 PX (100% FLEET)		LARGE, <60,000 LBS (75% FLEET & 60% USEFUL LOAD)	
CRITICAL AIRCRAFT (TYPE)	Beech King Air B200		Cessna Citation Sovereign		Cessna Citation X	
CRITICAL AIRCRAFT (WINGSPAN)	50.25'		69.3'		69.2'	
CRITICAL AIRCRAFT (TAIL HEIGHT)	14.25'		19.3'		19.3'	
CRITICAL AIRCRAFT (APPROACH SPEED)	100 (Kts.)		120 (Kts.)		130 (Kts.)	
MAXIMUM TAKEOFF WEIGHT (MTOW)	12500 LBS (SW)		30000 LBS (SW)		36000 LBS.	
RUNWAY END ELEVATION	3086.0'	3079.4'	3090.2'	3078.0'	3096.0'	3078.3'
TOUCHDOWN ZONE ELEVATION (TDZE)	3086.0'	3080.9'	3090.2'	3080.4'	3096.0'	3080.7'
RUNWAY GRADIENT	0.138%		0.239%		0.322%	
MAX GRADE WITHIN RUNWAY LENGTH (%)	0.336%		0.723%		7.230%	
RUNWAY LIGHTING	MIRL		MIRL		MIRL	
PAVEMENT TYPE	BITUMINOUS		BITUMINOUS		BITUMINOUS	
RUNWAY CATEGORY	UTILITY		OTHER-THAN-UTILITY		OTHER-THAN-UTILITY	
PAVEMENT STRENGTH (WHEEL-LOAD)	12500 LBS (SW)		30000 LBS (SW)		36000 LBS (SW)	
PAVEMENT CLASSIFICATION NUMBER (PCN)	-		-		-	
PAVEMENT MARKINGS	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
SURFACE TREATMENT	NONE		GROOVED		GROOVED	
RUNWAY SAFETY AREA (RSA)	5395' x 150'		5700' x 150'		7500' x 500'	
RUNWAY OBJECT FREE AREA (OFA)	5395' x 500'		5700' x 500'		7500' x 800'	
RUNWAY OBSTACLE FREE ZONE (OFZ)	5195' x 250'		5500' x 400'		5900' x 400'	
14 CFR PART 77 APPROACH TYPE	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
14 CFR PART 77 APPROACH SLOPE	20:1	20:1	34:1	34:1	34:1	34:1
14 CFR PART 77 APPROACH DIMENSIONS	500 X 2000 X 5000	500 X 2000 X 5000	500 X 3500 X 10000	500 X 3500 X 10000	500 X 3500 X 10000	500 X 3500 X 10000
VISIBILITY MINIMUMS	1 MILE	1 MILE	7/8	1 MILE	7/8	1 MILE
THRESHOLD SITING SURFACE (TSS) CATEGORY	4	4	6	4	6	4
THRESHOLD SITING SURFACE (TSS) SLOPE	20:1	20:1	20:1	20:1	20:1	20:1
THRESHOLD SITING SURFACE (TSS) DIMENSIONS	STARTS 200' FROM THRESHOLD, 400' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 400' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 800' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 400' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 800' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 400' X 3800' X 10000'
GLIDEPATH QUALIFICATION SURFACE (GQS)	30:1	30:1	30:1	30:1	30:1	30:1
GLIDEPATH QUALIFICATION SURFACE (GQS) DIMENSIONS	275' X 1520' X 10000'	275' X 1520' X 10000'	275' X 1520' X 10000'	275' X 1520' X 10000'	300' X 1520' X 10000'	300' X 1520' X 10000'
DEPARTURE SURFACE	40:1	40:1	40:1	40:1	40:1	40:1
DEPARTURE SURFACE DIMENSIONS	1000' X 6466' X 10200'	1000' X 6466' X 10200'	1000' X 6466' X 10200'	1000' X 6466' X 10200'	1000' X 6466' X 10200'	1000' X 6466' X 10200'
AERONAUTICAL SURVEY-TYPE REQUIRED	VERTICALLY-GUIDED	VERTICALLY-GUIDED	VERTICALLY-GUIDED	VERTICALLY-GUIDED	VERTICALLY-GUIDED	VERTICALLY-GUIDED
RUNWAY ORIENTATION (TRUE)	179.966°	359.966°	179.966°	359.966°	179.966°	359.966°
MAGNETIC DECLINATION (2016)	13.32° (E)	13.32° (E)	13.32° (E)	13.32° (E)	13.32° (E)	13.32° (E)
RUNWAY ORIENTATION (MAGNETIC)	166.646°	346.646°	166.646°	346.646°	166.646°	346.646°
VISUAL AND INSTRUMENT NAVAIDS (NAVAIDs)	PAPI, LPV	PAPI, LPV	PAPI, LPV	PAPI, LPV	PAPI, LPV	PAPI, LPV
DISPLACED THRESHOLD	0'	0'	0'	0'	0'	0'
TAKEOFF RUNWAY AVAILABLE (TORA)	4795'	4795'	5100'	5100'	5500'	5500'
TAKEOFF DISTANCE AVAILABLE (TODA)	4795'	4795'	5100'	5100'	5500'	5500'
ACCELERATED STOP DISTANCE AVAILABLE (ASDA)	4795'	4795'	5100'	5100'	5500'	5500'
LANDING DISTANCE AVAILABLE (LDA)	4795'	4795'	5100'	5100'	5500'	5500'
RPZ DIMENSIONS - APPROACH	250' X 450' X 1000'	250' X 450' X 1000'	1000' X 1510' X 1700'	500' X 700' X 1000'	1000' X 1510' X 1700'	500' X 700' X 1000'
RPZ DIMENSIONS - DEPARTURE	250' X 450' X 1000'	250' X 450' X 1000'	500' X 700' X 1000'	500' X 700' X 1000'	500' X 1010' X 1700'	500' X 1010' X 1700'

TAXIWAY DATA TABLE

	EXISTING (E)	FUTURE (F)	ULTIMATE (U)
HIGHEST TAXIWAY DESIGN GROUP (TDG)	2	2	2
TAXIWAY WIDTH	35'	35'	35'
TAXIWAY SAFETY AREA WIDTH	79'	79'	79'
TAXIWAY OBJECT FREE AREA WIDTH	131'	131'	131'
TAXILANE WIDTH	35'	35'	35'
TAXILANE OBJECT FREE AREA WIDTH	115'	115'	115'
TAXIWAY LIGHTING	REFLECTORS	REFLECTORS	MITL
TAXILANE LIGHTING	NONE	NONE	REFLECTORS

MODIFICATION TO DESIGN STANDARDS

APPROVAL DATE	AIRSPACE CASE #	LOCATION	STANDARD MODIFIED	DESCRIPTION
NONE REQUIRED				

COORDINATE SUMMARY TABLE

Point	Elevation	Latitude (DD-MM-SS)	Longitude (DD-MM-SS)
ARP (E)	3079.9	N 47 ° 34 ' 1.832 "	W 114 ° 06 ' 3.858 "
ARP (F)	3080.0	N 47 ° 34 ' 3.342 "	W 114 ° 06 ' 2.984 "
ARP (U)	3080.5	N 47 ° 34 ' 9.267 "	W 114 ° 06 ' 2.989 "
Rwy 16 End (E)	3086.0	N 47 ° 34 ' 25.504 "	W 114 ° 06 ' 3.878 "
Rwy 16 TDZE (E)	3086.0	N 47 ° 34 ' 25.504 "	W 114 ° 06 ' 3.878 "
Rwy 34 End (E)	3079.4	N 47 ° 33 ' 38.161 "	W 114 ° 06 ' 3.837 "
Rwy 34 TDZE (E)	3080.9	N 47 ° 34 ' 7.785 "	W 114 ° 06 ' 3.863 "
Rwy 16 End (F)	3090.2	N 47 ° 34 ' 28.522 "	W 114 ° 06 ' 3.005 "
Rwy 16 TDZE (F)	3090.2	N 47 ° 34 ' 28.522 "	W 114 ° 06 ' 3.005 "
Rwy 34 End (F)	3078.0	N 47 ° 33 ' 38.161 "	W 114 ° 06 ' 2.962 "
Rwy 34 TDZE (F)	3080.4	N 47 ° 34 ' 7.785 "	W 114 ° 06 ' 2.987 "
Rwy 16 End (U)	3096.0	N 47 ° 34 ' 36.422 "	W 114 ° 06 ' 3.012 "
Rwy 16 TDZE (U)	3096.0	N 47 ° 34 ' 36.422 "	W 114 ° 06 ' 3.012 "
Rwy 34 End (U)	3078.3	N 47 ° 33 ' 42.111 "	W 114 ° 06 ' 2.965 "
Rwy 34 TDZE (U)	3080.7	N 47 ° 34 ' 11.735 "	W 114 ° 06 ' 2.991 "

TDZE = Touchdown Zone Elevation ARP = Airport Reference Point

AIRPORT DATA TABLE

ITEM	EXISTING (E)	FUTURE (F)	ULTIMATE (U)
AIRPORT REFERENCE CODE (ARC)	B-II	B-II	C-II
AIRPORT OWNERSHIP	PUBLIC	PUBLIC	PUBLIC
NPIAS SERVICE LEVEL	GENERAL AVIATION - OTHER	GENERAL AVIATION - OTHER	GENERAL AVIATION - OTHER
NPIAS ASSET CLASSIFICATION	LOCAL	LOCAL	LOCAL
STATE SYSTEM PLAN SERVICE LEVEL	General Avation	General Avation	General Avation
AIRPORT ELEVATION (MSL)	3086.0'	3090.2'	3096.0'
AIRPORT REFERENCE POINT (ARP)	(N) 47° 34' 01.832" (W) 114° 06' 03.858"	(N) 47° 34' 03.342" (W) 114° 06' 02.984"	(N) 47° 34' 09.267" (W) 114° 06' 02.989"
MEAN MAX TEMPERATURE (MONTH)	83.1° (JUL.)		
AIRPORT NAVAIDS (FAA-OWNED)	-	-	-
AIRPORT NAVAIDS (SPONSOR-OWNED)	Airport Beacon, Lighted Windcone, Segmented Circle, AWOS II	Airport Beacon, Lighted Windcone, Segmented Circle, AWOS II	Airport Beacon, Lighted Windcone, Segmented Circle, AWOS II
MISCELLANEOUS FACILITIES	-	-	-
MAGNETIC DECLINATION WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION	13.32° (E)	13.32° (E)	13.32° (E)
MAGNETIC DECLINATION DATE	2016	2016	2016

NOTES:
1. DATA USED WITHIN THIS AIRPORT LAYOUT PLAN SET IS BASED ON:
   1. AERONAUTICAL SURVEY (TOPOGRAPHIC) COMPLETED JUNE 2016 BY KLJ.
   2. AERONAUTICAL SURVEY (AERIAL) COMPLETED JULY 2016 BY QUANTUM SPATIAL.
   3. USGS NATIONAL ELEVATION DATASET AT 1 ARC SECOND.
   4. QUADRANGLE MAPS FROM USGS.
      (DATA IS ONLY AS ACCURATE AS THE SOURCES LISTED. ANY TOWERS, STRUCTURES, OR OBJECTS CONSTRUCTED AFTER THESE DATES ARE NOT REPRESENTED IN THIS AIRPORT LAYOUT PLAN SET.)
2. HORIZONTAL DATUM = (GRID) STATE PLANE, NAD 83, MT – FIPS 2500, INTERNATIONAL FEET
3. VERTICAL DATUM = NAVD 88, U.S. SURVEY FEET

KLJ

RONAN AIRPORT
CITY OF RONAN AND LAKE COUNTY (OWNER)
RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

AIRPORT DATA SHEET

Rev.	Date	Description

DRAFTED MTK
REVIEWED BJM
PROJECT NUMBER 21515106
LAST REVISED DATE

SHEET **A-2**

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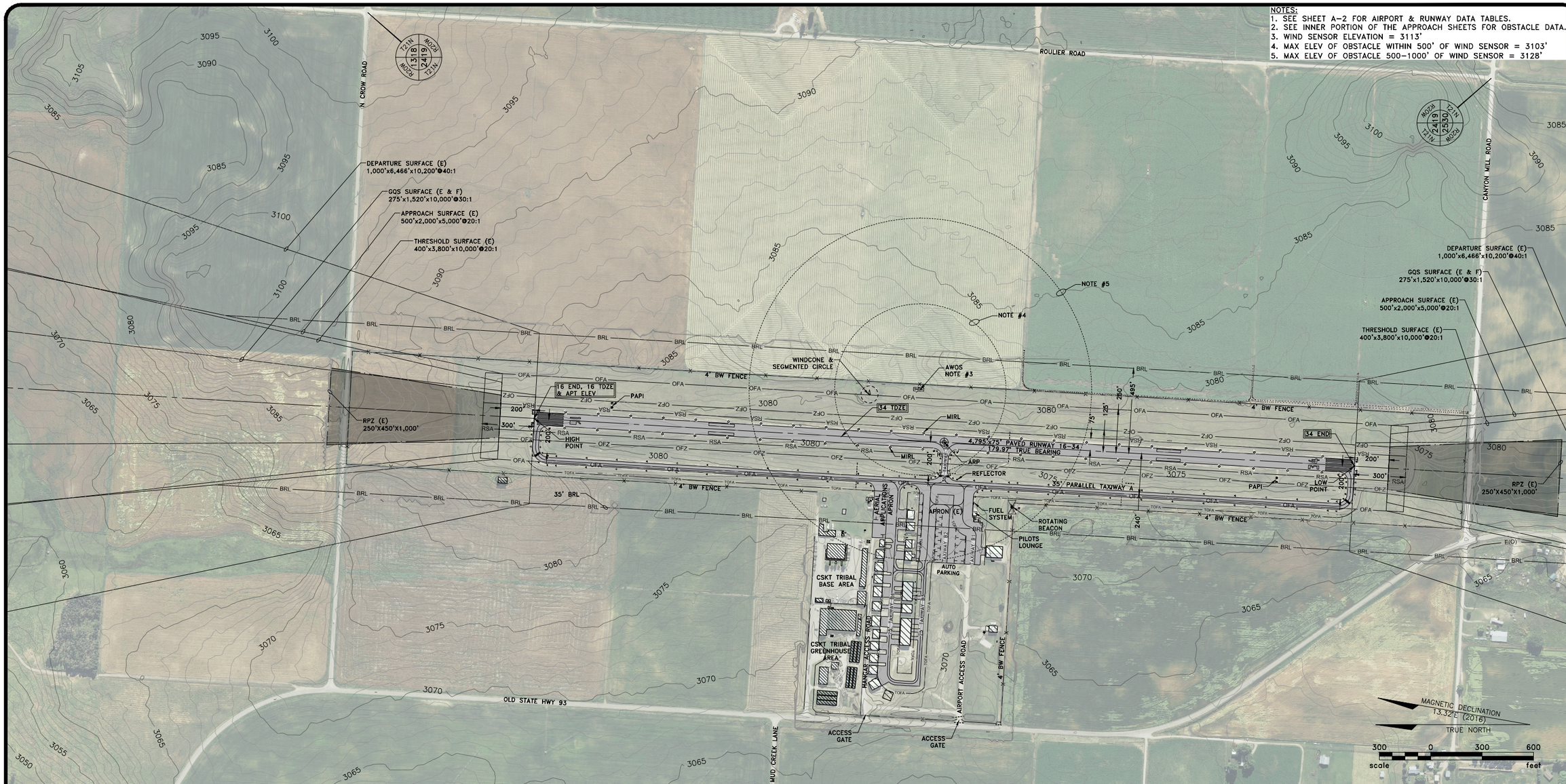
NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. SEE INNER PORTION OF THE APPROACH SHEETS FOR OBSTACLE DATA.
3. WIND SENSOR ELEVATION = 3113'
4. MAX ELEV OF OBSTACLE WITHIN 500' OF WIND SENSOR = 3103'
5. MAX ELEV OF OBSTACLE 500–1000' OF WIND SENSOR = 3128'



A.L.P. APPROVALS

FEDERAL AVIATION ADMINISTRATION

SIGNATURE:_____
NAME:_____
TITLE:_____
DATE: _____

AIRSPACE APPROVAL

A.L.P. AIRSPACE APPROVAL DATE: _____
CASE NO:_____

AIRPORT SPONSOR

SIGNATURE:_____
NAME:_____
TITLE:_____
DATE: _____

LEGEND

EXISTING (E)	ITEM
	AIRSPACE EASEMENT
BRL	BUILDING RESTRICTION LINE (BRL)
OFA	RUNWAY OBJECT FREE AREA (OFA)
RSA	RUNWAY SAFETY AREA (RSA)
TOFA	TAXIWAY OBJECT FREE AREA (TOFA)
N/A	BUILDING/BUILDING LOT
ASPHALT CONCRETE	AIRSIDE PAVED SURFACE
	LANDSIDE ROAD/PARKING
	UNPAVED SURFACE (GRAVEL)
	TREE ROWS, BUSHES
	4' BARBED WIRE FENCE
	CHAIN-LINK FENCE
	AIRPLANE TIEDOWN
	RUNWAY/THRESHOLD LIGHT
	TAXIWAY REFLECTOR
	AIRPORT GUIDANCE SIGN
	CULVERT WITH END SECTION

RUNWAY DATA TABLE

ITEM	EXISTING (E)	
RUNWAY DESIGNATION	16	34
RUNWAY DIMENSIONS	4795' x 75'	
RUNWAY END ELEVATION	3086.0'	3079.4'
TOUCHDOWN ZONE ELEVATION (TDZE)	3086.0'	3080.9'
RUNWAY GRADIENT	0.138%	
RUNWAY LIGHTING	MIRL	
PAVEMENT TYPE	BITUMINOUS	
RUNWAY CATEGORY	UTILITY	
RUNWAY SAFETY AREA (RSA)	5395' x 150'	
RUNWAY OBJECT FREE AREA (OFA)	5395' x 500'	
RUNWAY OBSTACLE FREE ZONE (OFZ)	5195' x 250'	
14 CFR PART 77 APPROACH TYPE	NON-PRECISION	NON-PRECISION
VISIBILITY MINIMUMS	1 MILE	1 MILE
RUNWAY ORIENTATION (TRUE)	179.966°	359.966°
VISUAL AND INSTRUMENT NAVAIDS (NAVAIDs)	PAPI, LPV	PAPI, LPV
TAKEOFF RUNWAY AVAILABLE (TORA)	4795'	4795'
TAKEOFF DISTANCE AVAILABLE (TODA)	4795'	4795'
ACCELERATED STOP DISTANCE AVAILABLE (ASDA)	4795'	4795'
LANDING DISTANCE AVAILABLE (LDA)	4795'	4795'

TAXIWAY DATA TABLE

	EXISTING (E)
HIGHEST TAXIWAY DESIGN GROUP (TDG)	2
TAXIWAY WIDTH	35'
TAXIWAY SAFETY AREA WIDTH	79'
TAXIWAY OBJECT FREE AREA WIDTH	131'
TAXILANE WIDTH	35'
TAXILANE OBJECT FREE AREA WIDTH	115'
TAXIWAY LIGHTING	REFLECTORS
TAXILANE LIGHTING	NONE

COORDINATE SUMMARY TABLE

Point	Elevation	Latitude (DD-MM-SS)	Longitude (DD-MM-SS)
ARP (E)	3079.9	N 47 ° 34 ' 1.832 "	W 114 ° 06 ' 3.858 "
Rwy 16 End (E)	3086.0	N 47 ° 34 ' 25.504 "	W 114 ° 06 ' 3.878 "
Rwy 16 TDZE (E)	3086.0	N 47 ° 34 ' 25.504 "	W 114 ° 06 ' 3.878 "
Rwy 34 End (E)	3079.4	N 47 ° 33 ' 38.161 "	W 114 ° 06 ' 3.837 "
Rwy 34 TDZE (E)	3080.9	N 47 ° 34 ' 7.785 "	W 114 ° 06 ' 3.863 "

TDZE = Touchdown Zone Elevation ARP = Airport Reference Point

KLJ

RONAN AIRPORT

CITY OF RONAN AND LAKE COUNTY (OWNER)

RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

AIRPORT LAYOUT PLAN (EXISTING)

Rev.	Date	Description

DRAFTED MTK
REVIEWED BJM
PROJECT NUMBER 21515106
LAST REVISED DATE

SHEET A-3

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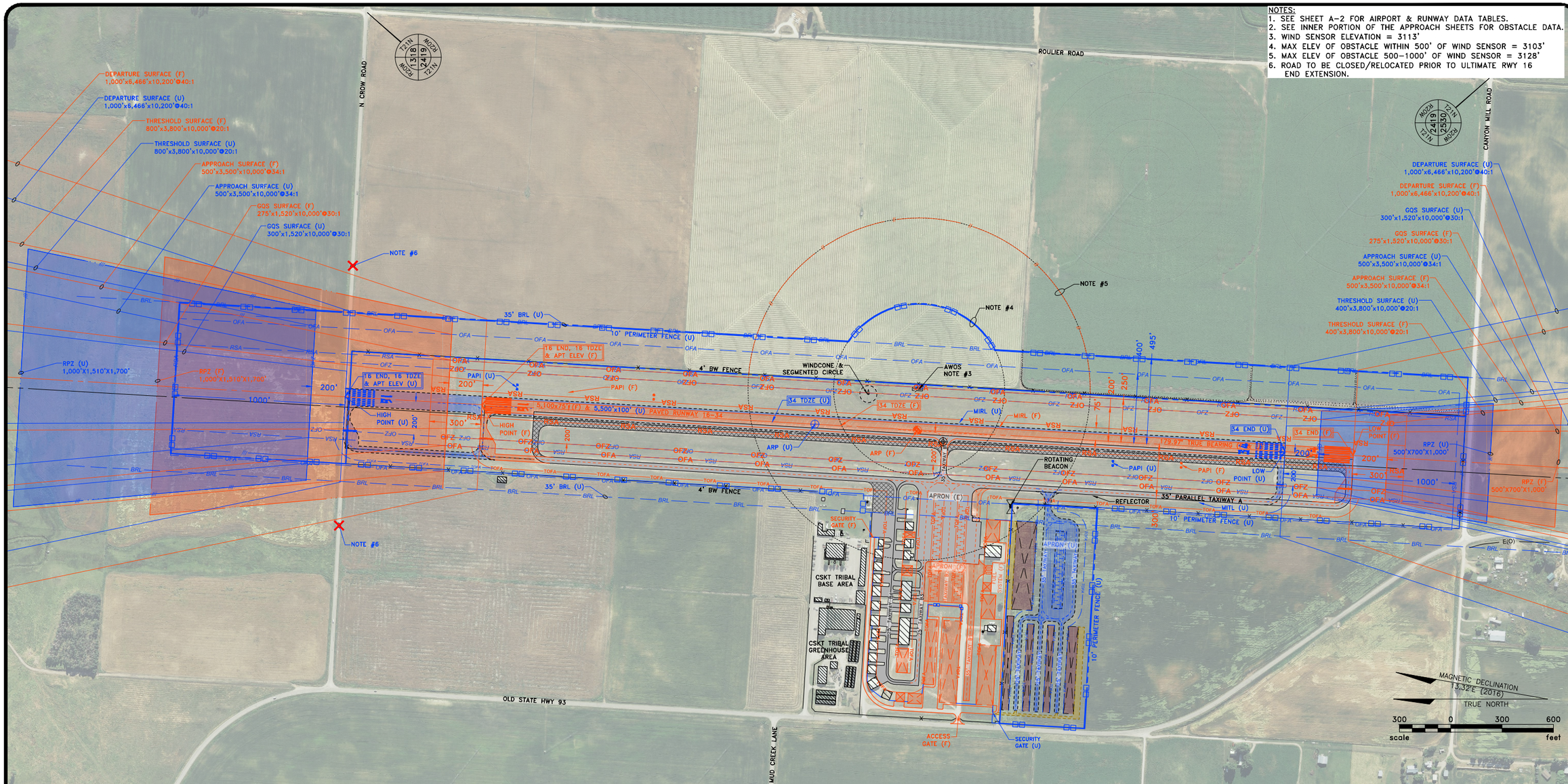
April 12, 2018 – 4:50 PM – P:\Airport\MT\Ronan\Projects\21515106\CADD\ALP\21515106_Plan(E).dwg (Plan (E))

NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. SEE INNER PORTION OF THE APPROACH SHEETS FOR OBSTACLE DATA.
3. WIND SENSOR ELEVATION = 3113'
4. MAX ELEV OF OBSTACLE WITHIN 500' OF WIND SENSOR = 3103'
5. MAX ELEV OF OBSTACLE 500–1000' OF WIND SENSOR = 3128'
6. ROAD TO BE CLOSED/RELOCATED PRIOR TO ULTIMATE RWY 16 END EXTENSION.



A.L.P. APPROVALS

FEDERAL AVIATION ADMINISTRATION

SIGNATURE:_____
NAME:_____
TITLE:_____
DATE: _____

AIRSPACE APPROVAL

A.L.P. AIRSPACE APPROVAL DATE: _____
CASE NO:_____

AIRPORT SPONSOR

SIGNATURE:_____
NAME:_____
TITLE:_____
DATE: _____

RUNWAY DATA TABLE

ITEM	FUTURE (F)		ULTIMATE (U)	
RUNWAY DESIGNATION	16	34	16	34
RUNWAY DIMENSIONS	5100' x 75'		5500' x 100'	
RUNWAY END ELEVATION	3090.2'	3078.0'	3096.0'	3078.3'
TOUCHDOWN ZONE ELEVATION (TDZE)	3090.2'	3080.4'	3096.0'	3080.7'
RUNWAY GRADIENT	0.239%		0.322%	
RUNWAY LIGHTING	MIRL		MIRL	
PAVEMENT TYPE	BITUMINOUS		BITUMINOUS	
RUNWAY CATEGORY	OTHER-THAN-UTILITY		OTHER-THAN-UTILITY	
RUNWAY SAFETY AREA (RSA)	5700' x 150'		7500' x 500'	
RUNWAY OBJECT FREE AREA (OFA)	5700' x 500'		7500' x 800'	
RUNWAY OBSTACLE FREE ZONE (OFZ)	5500' x 400'		5900' x 400'	
14 CFR PART 77 APPROACH TYPE	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
VISIBILITY MINIMUMS	7/8	1 MILE	7/8	1 MILE
RUNWAY ORIENTATION (TRUE)	179.966°	359.966°	179.966°	359.966°
VISUAL AND INSTRUMENT NAVAIDS (NAVAIDs)	PAPI, LPV	PAPI, LPV	PAPI, LPV	PAPI, LPV
TAKEOFF RUNWAY AVAILABLE (TORA)	5100'	5100'	5500'	5500'
TAKEOFF DISTANCE AVAILABLE (TODA)	5100'	5100'	5500'	5500'
ACCELERATED STOP DISTANCE AVAILABLE (ASDA)	5100'	5100'	5500'	5500'
LANDING DISTANCE AVAILABLE (LDA)	5100'	5100'	5500'	5500'

TAXIWAY DATA TABLE

	FUTURE (F)	ULTIMATE (U)
HIGHEST TAXIWAY DESIGN GROUP (TDG)	2	2
TAXIWAY WIDTH	35'	35'
TAXIWAY SAFETY AREA WIDTH	79'	79'
TAXIWAY OBJECT FREE AREA WIDTH	131'	131'
TAXILANE WIDTH	35'	35'
TAXILANE OBJECT FREE AREA WIDTH	115'	115'
TAXIWAY LIGHTING	REFLECTORS	MITL
TAXILANE LIGHTING	NONE	REFLECTORS

COORDINATE SUMMARY TABLE

Point	Elevation	Latitude (DD-MM-SS)	Longitude (DD-MM-SS)
ARP (F)	3080.0	N 47 ° 34 ' 3.342 "	W 114 ° 06 ' 2.984 "
ARP (U)	3080.5	N 47 ° 34 ' 9.267 "	W 114 ° 06 ' 2.989 "
Rwy 16 End (F)	3090.2	N 47 ° 34 ' 28.522 "	W 114 ° 06 ' 3.005 "
Rwy 16 TDZE (F)	3090.2	N 47 ° 34 ' 28.522 "	W 114 ° 06 ' 3.005 "
Rwy 34 End (F)	3078.0	N 47 ° 33 ' 38.161 "	W 114 ° 06 ' 2.962 "
Rwy 34 TDZE (F)	3080.4	N 47 ° 34 ' 7.785 "	W 114 ° 06 ' 2.987 "
Rwy 16 End (U)	3096.0	N 47 ° 34 ' 36.422 "	W 114 ° 06 ' 3.012 "
Rwy 16 TDZE (U)	3096.0	N 47 ° 34 ' 36.422 "	W 114 ° 06 ' 3.012 "
Rwy 34 End (U)	3078.3	N 47 ° 33 ' 42.111 "	W 114 ° 06 ' 2.965 "
Rwy 34 TDZE (U)	3080.7	N 47 ° 34 ' 11.735 "	W 114 ° 06 ' 2.991 "

TDZE = Touchdown Zone Elevation ARP = Airport Reference Point

LEGEND

EXISTING (E)	ITEM	FUTURE (F)	ULTIMATE (U)
NONE	AIRSPACE EASEMENT	NONE	///
BRL	35' BUILDING RESTRICTION LINE (BRL)	BRL	BRL
OFA	RUNWAY OBJECT FREE AREA (OFA)	OFA	OFA
RSA	RUNWAY SAFETY AREA (RSA)	RSA	RSA
TOFA	TAXIWAY OBJECT FREE AREA (TOFA)	TOFA	TOFA
N/A	BUILDING/BUILDING LOT	N/A	N/A
ASPHALT CONCRETE	AIRSIDE PAVED SURFACE		
	LANDSIDE ROAD/PARKING		
	UNPAVED SURFACE (GRAVEL)	NONE	NONE
	BARBED WIRE FENCE	NONE	NONE
	CHAIN-LINK FENCE	NONE	NONE
NONE	10' WILDLIFE FENCE	NONE	
	AIRPLANE TIEDOWN		
N/A	BUILDING/PAVEMENT TO BE REMOVED		

Rev.	Date	Description

RONAN AIRPORT

CITY OF RONAN AND LAKE COUNTY (OWNER)

RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

AIRPORT LAYOUT PLAN (FUTURE & ULTIMATE)

DRAFTED MTK
REVIEWED BJM
PROJECT NUMBER 21515106
LAST REVISED DATE

SHEET **A-4**

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April 12, 2018 – 4:54 PM – P:\Airport\MT\Ronan\Projects\21515106\CADD\ALP\21515106_Plan(F&U).dwg (Plan (U))

NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. SEE INNER PORTION OF THE APPROACH SHEETS FOR OBSTACLE DATA.
3. WIND SENSOR ELEVATION = 3113'
4. MAX ELEV OF OBSTACLE WITHIN 500' OF WIND SENSOR = 3103'
5. MAX ELEV OF OBSTACLE 500-1000' OF WIND SENSOR = 3128'

LEGEND

EXISTING (E)	ITEM
	AIRSPACE EASEMENT
BRL	35' BUILDING RESTRICTION LINE (BRL)
OFA	RUNWAY OBJECT FREE AREA (OFA)
RSA	RUNWAY SAFETY AREA (RSA)
TOFA	TAXIWAY OBJECT FREE AREA (TOFA)
N/A	BUILDING/BUILDING LOT
ASPHALT CONCRETE	AIRSIDE PAVED SURFACE
	LANDSIDE ROAD/PARKING
	UNPAVED SURFACE (GRAVEL)
	DECIDUOUS/EVERGREEN TREE
	TREE ROWS, BUSHES
	BARBED WIRE FENCE
	CHAIN-LINK FENCE
	WILDLIFE FENCE
	POWER POLE/LIGHT POLE
	AIRPLANE TIEDOWN
	RUNWAY/THRESHOLD LIGHT
	TAXIWAY LIGHT/TAXIWAY REFLECTOR
#	AIRPORT SIGN
	CULVERT WITH END SECTION

BUILDING IDENTIFICATION TABLE

ID	DESCRIPTION	PEAK ELEVATION	OBSTRUCTION LIGHTING	DISPOSITION
1*	HANGAR	3099.6	NONE	-
2	HANGAR	3096.2	NONE	-
3	HANGAR	3097.3	NONE	-
4	HANGAR	3094.2	NONE	-
5	HANGAR	3093.6	NONE	-
6	HANGAR	3092.8	NONE	-
7	HANGAR	3095.4	NONE	-
8	HANGAR	3098.1	NONE	-
9	HANGAR	3100.6	NONE	-
10	HANGAR	3096.0	NONE	-
11	HANGAR	3098.7	NONE	-
12	HANGAR	3101.1	NONE	-
13	HANGAR	3098.0	NONE	-
14	HANGAR	3099.8	NONE	-
15	HANGAR	3096.5	NONE	-
16	HANGAR	3097.8	NONE	-
17	HANGAR	3098.8	NONE	-
18	HANGAR	3099.0	NONE	-
19	HANGAR	3094.8	NONE	-
20	HANGAR	3094.2	NONE	-
21*	PILOTS LOUNGE	3089.4	NONE	-
22	SRE	3095.9	NONE	-
23	HANGAR	3096.4	NONE	-
24	ELECTRICAL ENCLOSURE	3081.5	NONE	-

* TO BE REMOVED AS NEEDED FOR DEVELOPMENT

TAXIWAY DATA TABLE

	EXISTING (E)
HIGHEST TAXIWAY DESIGN GROUP (TDG)	2
TAXIWAY WIDTH	35'
TAXIWAY SAFETY AREA WIDTH	79'
TAXIWAY OBJECT FREE AREA WIDTH	131'
TAXILANE WIDTH	35'
TAXILANE OBJECT FREE AREA WIDTH	115'
TAXIWAY LIGHTING	REFLECTORS
TAXILANE LIGHTING	NONE

KLJ

RONAN AIRPORT

CITY OF RONAN AND LAKE COUNTY (OWNER)

RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

TERMINAL AREA (EXISTING)

Rev.	Date	Description

DRAFTED MTK

REVIEWED BJM

PROJECT NUMBER 21515106

LAST REVISED DATE

SHEET A-5

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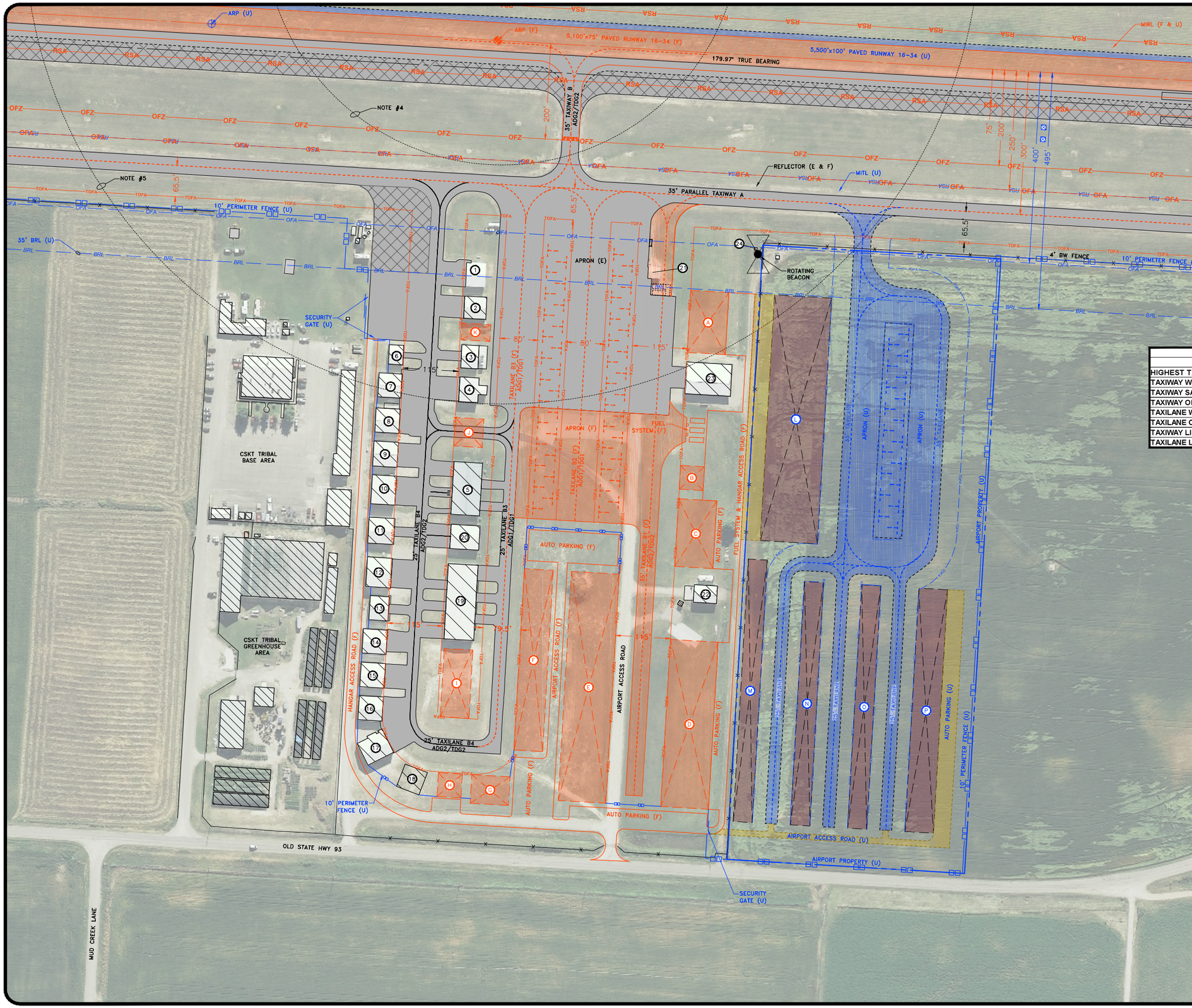

NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. SEE INNER PORTION OF THE APPROACH SHEETS FOR OBSTACLE DATA.
3. WIND SENSOR ELEVATION = 3113'
4. MAX ELEV OF OBSTACLE WITHIN 500' OF WIND SENSOR = 3103'
5. MAX ELEV OF OBSTACLE 500-1000' OF WIND SENSOR = 3128'

BUILDING IDENTIFICATION TABLE

ID	DESCRIPTION	PEAK ELEVATION	OBSTRUCTION LIGHTING	DISPOSITION
1*	HANGAR	3099.6	NONE	-
2	HANGAR	3096.2	NONE	-
3	HANGAR	3097.3	NONE	-
4	HANGAR	3094.2	NONE	-
5	HANGAR	3093.6	NONE	-
6	HANGAR	3092.8	NONE	-
7	HANGAR	3095.4	NONE	-
8	HANGAR	3098.1	NONE	-
9	HANGAR	3100.6	NONE	-
10	HANGAR	3096.0	NONE	-
11	HANGAR	3098.7	NONE	-
12	HANGAR	3101.1	NONE	-
13	HANGAR	3098.0	NONE	-
14	HANGAR	3099.8	NONE	-
15	HANGAR	3096.5	NONE	-
16	HANGAR	3097.8	NONE	-
17	HANGAR	3098.8	NONE	-
18	HANGAR	3099.0	NONE	-
19	HANGAR	3094.8	NONE	-
20	HANGAR	3094.2	NONE	-
21*	PILOTS LOUNGE	3089.4	NONE	-
22	SRE	3095.9	NONE	-
23	HANGAR	3096.4	NONE	-
24	ELECTRICAL ENCLOSURE	3081.5	NONE	-

* TO BE REMOVED AS NEEDED FOR DEVELOPMENT

TAXIWAY DATA TABLE

	FUTURE (F)	ULTIMATE (U)
HIGHEST TAXIWAY DESIGN GROUP (TDG)	2	2
TAXIWAY WIDTH	35'	35'
TAXIWAY SAFETY AREA WIDTH	79'	79'
TAXIWAY OBJECT FREE AREA WIDTH	131'	131'
TAXILANE WIDTH	35'	35'
TAXILANE OBJECT FREE AREA WIDTH	115'	115'
TAXIWAY LIGHTING	REFLECTORS	MITL
TAXILANE LIGHTING	NONE	REFLECTORS

LEGEND

EXISTING (E)	ITEM	FUTURE (F)	ULTIMATE (U)
NONE	AIRSPACE EASEMENT	NONE	///
BRL	35' BUILDING RESTRICTION LINE (BRL)	BRL	BRL
OFA	RUNWAY OBJECT FREE AREA (OFA)	OFA	OFA
RSA	RUNWAY SAFETY AREA (RSA)	RSA	RSA
TOFA	TAXIWAY OBJECT FREE AREA (TOFA)	TOFA	TOFA
N/A	BUILDING/BUILDING LOT	N/A	N/A
ASPHALT CONCRETE	AIRSIDE PAVED SURFACE		
	LANDSIDE ROAD/PARKING		
	UNPAVED SURFACE (GRAVEL)	NONE	NONE
	BARBED WIRE FENCE	NONE	NONE
	CHAIN-LINK FENCE	NONE	NONE
NONE	10' WILDLIFE FENCE	NONE	
	AIRPLANE TIEDOWN		
N/A	BUILDING/PAVEMENT TO BE REMOVED		

LOT IDENTIFICATION TABLE (F & U)

ID	DESCRIPTION
A	130'x80' FBO LOT
B	50'x50' PILOTS LOUNGE
C	140'x80' GROUP 2 HANGAR LOT
D	350'x100' AERIAL APPLICATION OPERATIONS LOTS
E	480'x100' GROUP 2 HANGAR LOT
F	380'x60' GROUP 1 HANGAR LOT
G	80'x60' GROUP 1 HANGAR LOT
H	50'x50' GROUP 1 HANGAR LOT
I	143'x60' GROUP 1 HANGAR LOT
J	60'x60' GROUP 1 HANGAR LOT
K	35'x60' GROUP 1 HANGAR LOT
L	515'x120' GROUP 2 HANGAR LOT
M	550'x40' GROUP 1 HANGAR LOT
N	510'x40' GROUP 1 HANGAR LOT
O	510'x40' GROUP 1 HANGAR LOT
P	510'x60' GROUP 1 HANGAR LOT

MAGNETIC DECLINATION 13.32°E (2016)
TRUE NORTH

100 0 100 200
scale feet

Rev.	Date	Description

KLJ

RONAN AIRPORT

CITY OF RONAN AND LAKE COUNTY (OWNER)

RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

TERMINAL AREA (FUTURE & ULTIMATE)

DRAFTED MTK
REVIEWED BJM
PROJECT NUMBER 21515106
LAST REVISED DATE

SHEET **A-6**

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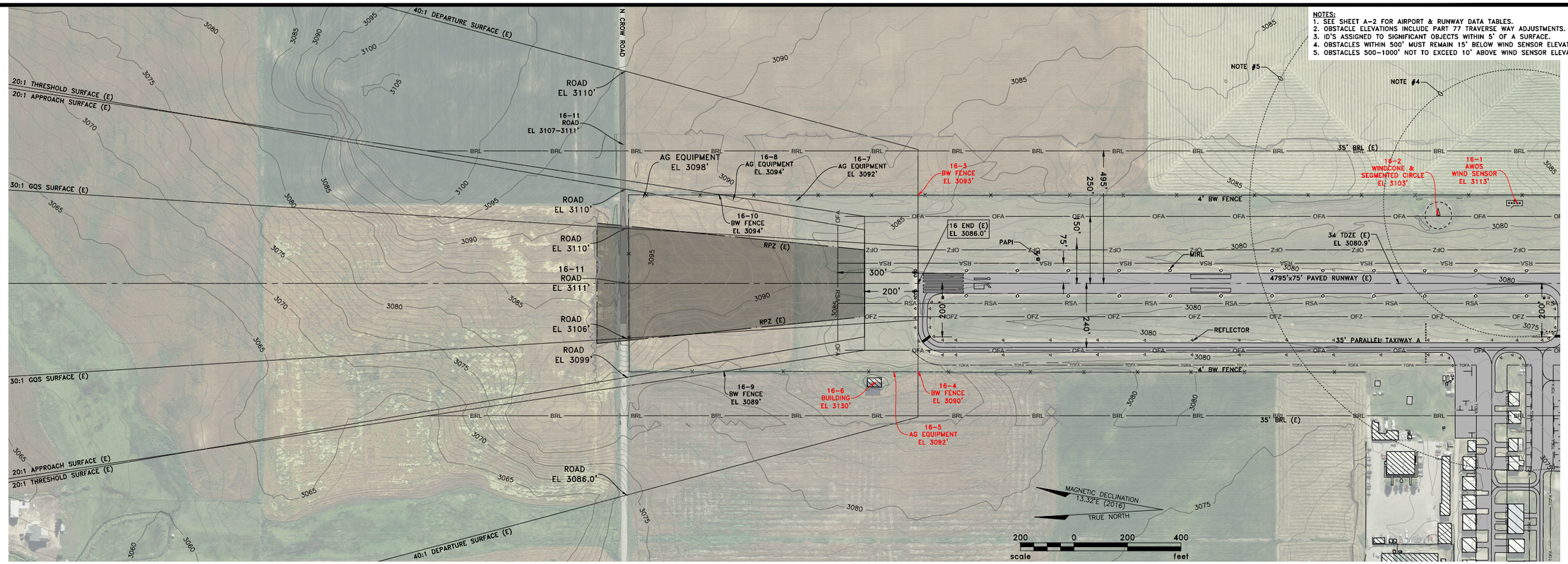
NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. OBSTACLE ELEVATIONS INCLUDE PART 77 TRAVERSE WAY ADJUSTMENTS.
3. ID'S ASSIGNED TO SIGNIFICANT OBJECTS WITHIN 5' OF A SURFACE.
4. OBSTACLES WITHIN 500' MUST REMAIN 15' BELOW WIND SENSOR ELEVATION.
5. OBSTACLES 500–1000' NOT TO EXCEED 10' ABOVE WIND SENSOR ELEVATION.



NOTE: ANY PORTION OF AN OBSTACLE PENETRATING AN AIRSPACE SURFACE IS SHOWN IN RED BELOW. AN FAA AERONAUTICAL STUDY WILL BE REQUIRED TO DETERMINE IF ANY OBSTRUCTION IS A HAZARD TO AIR NAVIGATION.

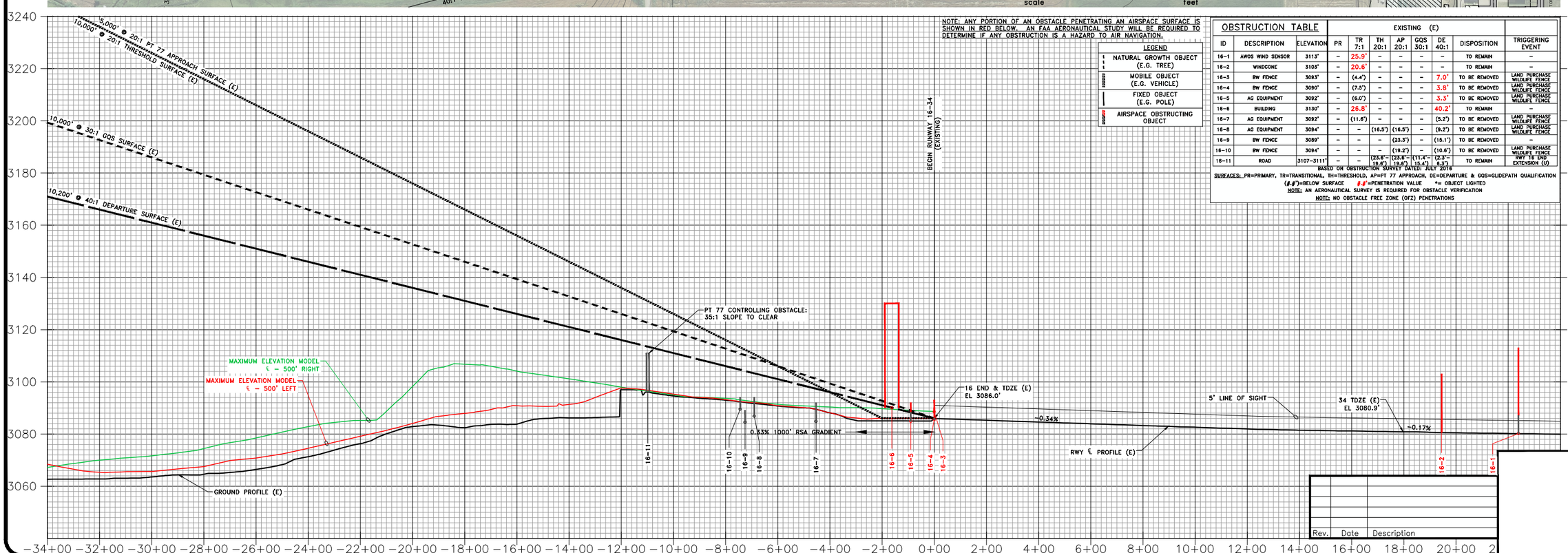
LEGEND
- NATURAL GROWTH OBJECT (E.G. TREE)
- MOBILE OBJECT (E.G. VEHICLE)
- FIXED OBJECT (E.G. POLE)
- AIRSPACE OBSTRUCTING OBJECT

OBSTRUCTION TABLE

ID	DESCRIPTION	ELEVATION	EXISTING (E) PR	TR 7:1	TH 20:1	AP 20:1	GQS 30:1	DE 40:1	DISPOSITION	TRIGGERING EVENT
16-1	AWOS WIND SENSOR	3113'	–	25.9'	–	–	–	–	TO REMAIN	–
16-2	WINDCONE	3103'	–	20.6'	–	–	–	–	TO REMAIN	–
16-3	BW FENCE	3093'	–	(4.4')	–	–	–	7.0'	TO BE REMOVED	LAND PURCHASE WILDLIFE FENCE
16-4	BW FENCE	3090'	–	(7.5')	–	–	–	3.8'	TO BE REMOVED	LAND PURCHASE WILDLIFE FENCE
16-5	AG EQUIPMENT	3092'	–	(6.0')	–	–	–	3.3'	TO BE REMOVED	LAND PURCHASE WILDLIFE FENCE
16-6	BUILDING	3130'	–	26.8'	–	–	–	40.2'	TO REMAIN	–
16-7	AG EQUIPMENT	3092'	–	(11.8')	–	–	–	(5.2')	TO BE REMOVED	LAND PURCHASE WILDLIFE FENCE
16-8	AG EQUIPMENT	3094'	–	–	(16.5')	(16.5')	–	(9.2')	TO BE REMOVED	LAND PURCHASE WILDLIFE FENCE
16-9	BW FENCE	3089'	–	–	–	(23.3')	–	(15.1')	TO BE REMOVED	–
16-10	BW FENCE	3094'	–	–	–	(19.2')	–	(10.6')	TO BE REMOVED	LAND PURCHASE WILDLIFE FENCE
16-11	ROAD	3107-3111'	–	–	(23.8'–18.8')	(23.8'–19.8')	(11.4'–15.4')	(2.3'–8.3')	TO REMAIN	RWY 16 END EXTENSION (U)

BASED ON OBSTRUCTION SURVEY DATED: JULY 2016

SURFACES: PR=PRIMARY, TR=TRANSITIONAL, TH=THRESHOLD, AP=PT 77 APPROACH, DE=DEPARTURE & GQS=GLIDEPATH QUALIFICATION
(#.#')=BELOW SURFACE #.#'=PENETRATION VALUE *= OBJECT LIGHTED
NOTE: AN AERONAUTICAL SURVEY IS REQUIRED FOR OBSTACLE VERIFICATION
NOTE: NO OBSTACLE FREE ZONE (OFZ) PENETRATIONS



Rev.	Date	Description

RONAN AIRPORT

CITY OF RONAN AND LAKE COUNTY (OWNER)

RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

INNER PORTION OF THE APPROACH SURFACE RUNWAY 16 END (EXISTING)

DRAFTED MTK/TLG
REVIEWED BJM
PROJECT NUMBER 21515106
LAST REVISED DATE

SHEET A-7

Apr 12, 2018 – 5:37pm – P:\Airport\MT\Ronan\Projects\21515106\CADD\ALP\21515106_InnerApproach.dwg (16 END (E))

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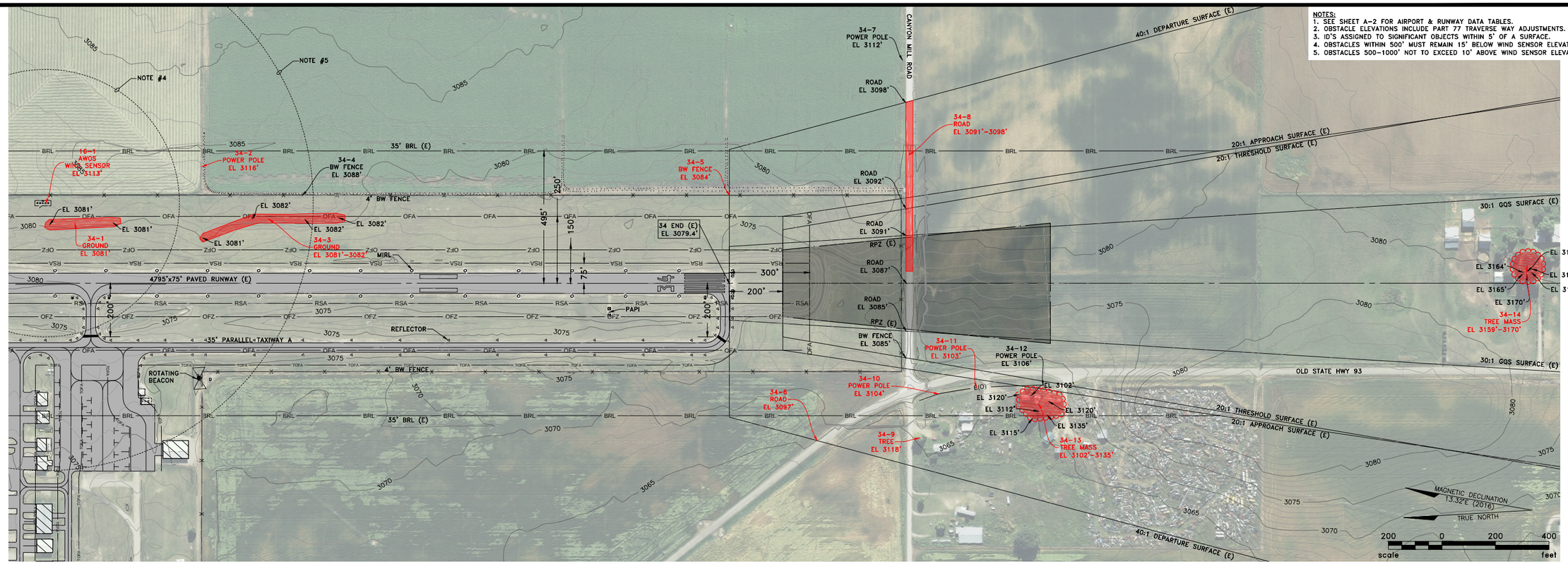
NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. OBSTACLE ELEVATIONS INCLUDE PART 77 TRAVERSE WAY ADJUSTMENTS.
3. ID'S ASSIGNED TO SIGNIFICANT OBJECTS WITHIN 5' OF A SURFACE.
4. OBSTACLES WITHIN 500' MUST REMAIN 15' BELOW WIND SENSOR ELEVATION.
5. OBSTACLES 500–1000' NOT TO EXCEED 10' ABOVE WIND SENSOR ELEVATION.



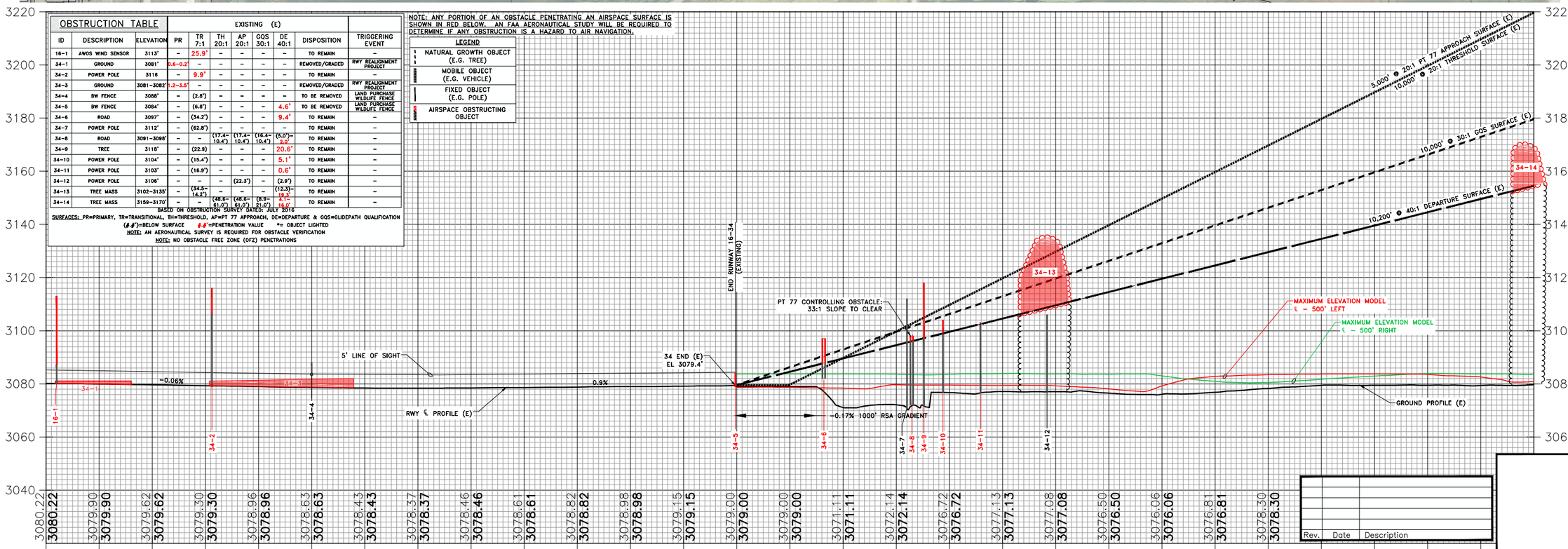
OBSTRUCTION TABLE			EXISTING (E)								TRIGGERING EVENT
ID	DESCRIPTION	ELEVATION	PR	TR 7:1	TH 20:1	AP 20:1	GQS 30:1	DE 40:1	DISPOSITION		
16-1	AWOS WIND SENSOR	3113'	–	25.9'	–	–	–	–	TO REMAIN		–
34-1	GROUND	3081'	0.6–0.2'	–	–	–	–	–	REMOVED/GRADED		RWY REALIGNMENT PROJECT
34-2	POWER POLE	3116	–	9.9'	–	–	–	–	TO REMAIN		–
34-3	GROUND	3081–3082'	1.2–3.5'	–	–	–	–	–	REMOVED/GRADED		RWY REALIGNMENT PROJECT
34-4	BW FENCE	3088'	–	(2.8')	–	–	–	–	TO BE REMOVED		LAND PURCHASE WILDLIFE FENCE
34-5	BW FENCE	3084'	–	(6.8')	–	–	–	4.6'	TO BE REMOVED		LAND PURCHASE WILDLIFE FENCE
34-6	ROAD	3097'	–	(34.2')	–	–	–	9.4'	TO REMAIN		–
34-7	POWER POLE	3112'	–	(62.8')	–	–	–	–	TO REMAIN		–
34-8	ROAD	3091–3098'	–	–	(17.4–10.4')	(17.4–10.4')	(16.4–10.4')	(5.0')–2.0'	TO REMAIN		–
34-9	TREE	3118'	–	(22.9)	–	–	–	20.6'	TO REMAIN		–
34-10	POWER POLE	3104'	–	(15.4')	–	–	–	5.1'	TO REMAIN		–
34-11	POWER POLE	3103'	–	(16.9')	–	–	–	0.6'	TO REMAIN		–
34-12	POWER POLE	3106'	–	–	–	(22.3')	–	(2.9')	TO REMAIN		–
34-13	TREE MASS	3102–3135'	–	(34.5–14.2')	–	–	–	(12.3)–19.3'	TO REMAIN		–
34-14	TREE MASS	3159–3170'	–	–	(48.6–61.0')	(48.6–61.0')	(8.9–21.0')	4.1–16.0'	TO REMAIN		–

BASED ON OBSTRUCTION SURVEY DATED: JULY 2016

SURFACES: PR=PRIMARY, TR=TRANSITIONAL, TH=THRESHOLD, AP=PT 77 APPROACH, DE=DEPARTURE & GQS=GLIDEPATH QUALIFICATION
(#.#')=BELOW SURFACE #.#'=PENETRATION VALUE *= OBJECT LIGHTED
NOTE: AN AERONAUTICAL SURVEY IS REQUIRED FOR OBSTACLE VERIFICATION
NOTE: NO OBSTACLE FREE ZONE (OFZ) PENETRATIONS

NOTE: ANY PORTION OF AN OBSTACLE PENETRATING AN AIRSPACE SURFACE IS SHOWN IN RED BELOW. AN FAA AERONAUTICAL STUDY WILL BE REQUIRED TO DETERMINE IF ANY OBSTRUCTION IS A HAZARD TO AIR NAVIGATION.

LEGEND
- NATURAL GROWTH OBJECT (E.G. TREE)
- MOBILE OBJECT (E.G. VEHICLE)
- FIXED OBJECT (E.G. POLE)
- AIRSPACE OBSTRUCTING OBJECT



Rev.	Date	Description

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RONAN AIRPORT

CITY OF RONAN AND LAKE COUNTY (OWNER)

RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

INNER PORTION OF THE APPROACH SURFACE
RUNWAY 34 END
(EXISTING)

DRAFTED MTK/TLG
REVIEWED BJM
PROJECT NUMBER 21515106
LAST REVISED DATE

SHEET A-8

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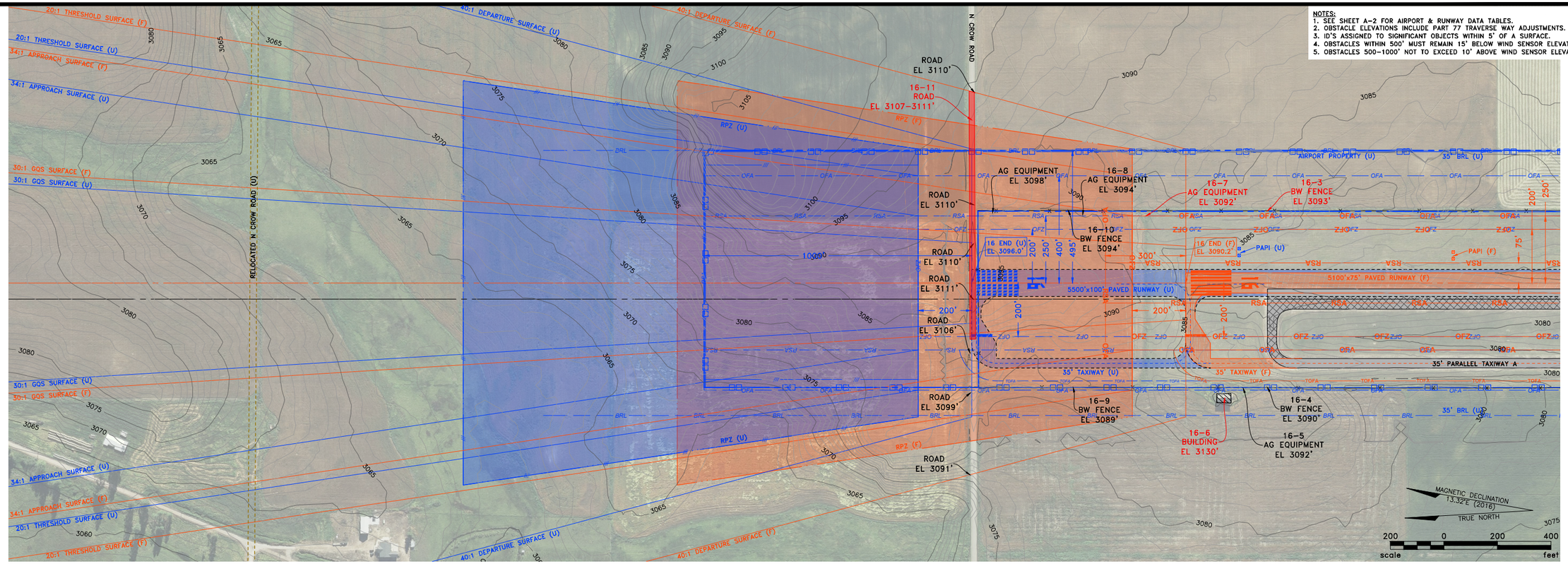
Apr 12, 2018 – 5:37pm – P:\Airport\MT\Ronan\Projects\21515106\CADD\ALP\21515106_InnerApproach.dwg (34 END (E))

NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. OBSTACLE ELEVATIONS INCLUDE PART 77 TRAVERSE WAY ADJUSTMENTS.
3. ID'S ASSIGNED TO SIGNIFICANT OBJECTS WITHIN 5' OF A SURFACE.
4. OBSTACLES WITHIN 500' MUST REMAIN 15' BELOW WIND SENSOR ELEVATION.
5. OBSTACLES 500–1000' NOT TO EXCEED 10' ABOVE WIND SENSOR ELEVATION.



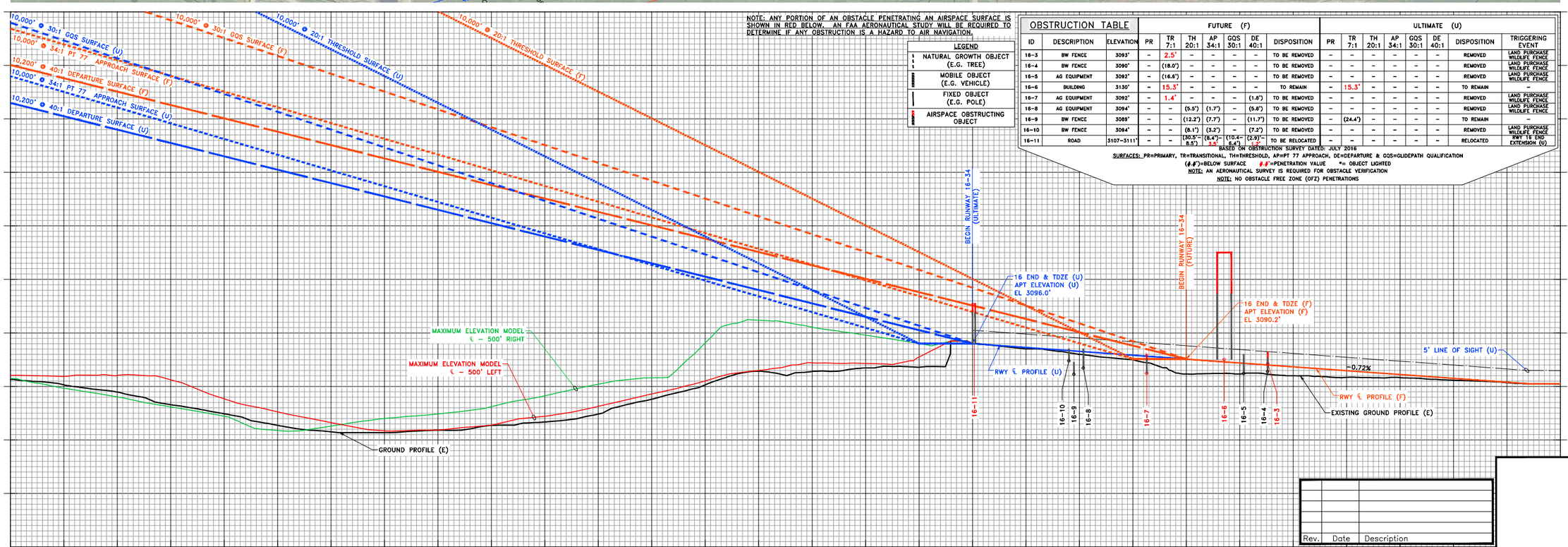
NOTE: ANY PORTION OF AN OBSTACLE PENETRATING AN AIRSPACE SURFACE IS SHOWN IN RED BELOW. AN FAA AERONAUTICAL STUDY WILL BE REQUIRED TO DETERMINE IF ANY OBSTRUCTION IS A HAZARD TO AIR NAVIGATION.

LEGEND
- NATURAL GROWTH OBJECT (E.G. TREE)
- MOBILE OBJECT (E.G. VEHICLE)
- FIXED OBJECT (E.G. POLE)
- AIRSPACE OBSTRUCTING OBJECT

OBSTRUCTION TABLE

ID	DESCRIPTION	ELEVATION	FUTURE (F) PR	TR 7:1	TH 20:1	AP 34:1	GQS 30:1	DE 40:1	DISPOSITION	ULTIMATE (U) PR	TR 7:1	TH 20:1	AP 34:1	GQS 30:1	DE 40:1	DISPOSITION	TRIGGERING EVENT
16-3	BW FENCE	3093'	–	2.5'	–	–	–	–	TO BE REMOVED	–	–	–	–	–	–	REMOVED	LAND PURCHASE WILDLIFE FENCE
16-4	BW FENCE	3090'	–	(18.0')	–	–	–	–	TO BE REMOVED	–	–	–	–	–	–	REMOVED	LAND PURCHASE WILDLIFE FENCE
16-5	AG EQUIPMENT	3092'	–	(16.6')	–	–	–	–	TO BE REMOVED	–	–	–	–	–	–	REMOVED	LAND PURCHASE WILDLIFE FENCE
16-6	BUILDING	3130'	–	15.3'	–	–	–	–	TO REMAIN	–	15.3'	–	–	–	–	TO REMAIN	–
16-7	AG EQUIPMENT	3092'	–	1.4'	–	–	–	(1.8')	TO BE REMOVED	–	–	–	–	–	–	REMOVED	LAND PURCHASE WILDLIFE FENCE
16-8	AG EQUIPMENT	3094'	–	–	(5.5')	(1.7')	–	(5.8')	TO BE REMOVED	–	–	–	–	–	–	REMOVED	LAND PURCHASE WILDLIFE FENCE
16-9	BW FENCE	3089'	–	–	(12.2')	(7.7')	–	(11.7')	TO BE REMOVED	–	(24.4')	–	–	–	–	TO REMAIN	–
16-10	BW FENCE	3094'	–	–	(8.1')	(3.2')	–	(7.2')	TO BE REMOVED	–	–	–	–	–	–	REMOVED	LAND PURCHASE WILDLIFE FENCE
16-11	ROAD	3107-3111'	–	–	(30.5'–8.5')	3.4'	(10.4'–6.4')	(2.9')–2.2'	TO BE RELOCATED	–	–	–	–	–	–	RELOCATED	RWY 16 END EXTENSION (U)

BASED ON OBSTRUCTION SURVEY DATED: JULY 2016
SURFACES: PR=PRIMARY, TR=TRANSITIONAL, TH=THRESHOLD, AP=PT 77 APPROACH, DE=DEPARTURE & GQS=GLIDEPATH QUALIFICATION
(#.#')=BELOW SURFACE #.#'=PENETRATION VALUE *= OBJECT LIGHTED
NOTE: AN AERONAUTICAL SURVEY IS REQUIRED FOR OBSTACLE VERIFICATION
NOTE: NO OBSTACLE FREE ZONE (OFZ) PENETRATIONS



Rev.	Date	Description

RONAN AIRPORT

CITY OF RONAN AND LAKE COUNTY (OWNER)

RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

INNER PORTION OF THE APPROACH SURFACE RUNWAY 16 END (FUTURE & ULTIMATE)

DRAFTED MTK/TLG
REVIEWED BJM
PROJECT NUMBER 21515106
LAST REVISED DATE

SHEET A-9

Apr 12, 2018 – 5:38pm – P:\Airport\MT\Ronan\Projects\21515106\CADD\ALP\21515106_InnerApproach.dwg (16 END(F&U))

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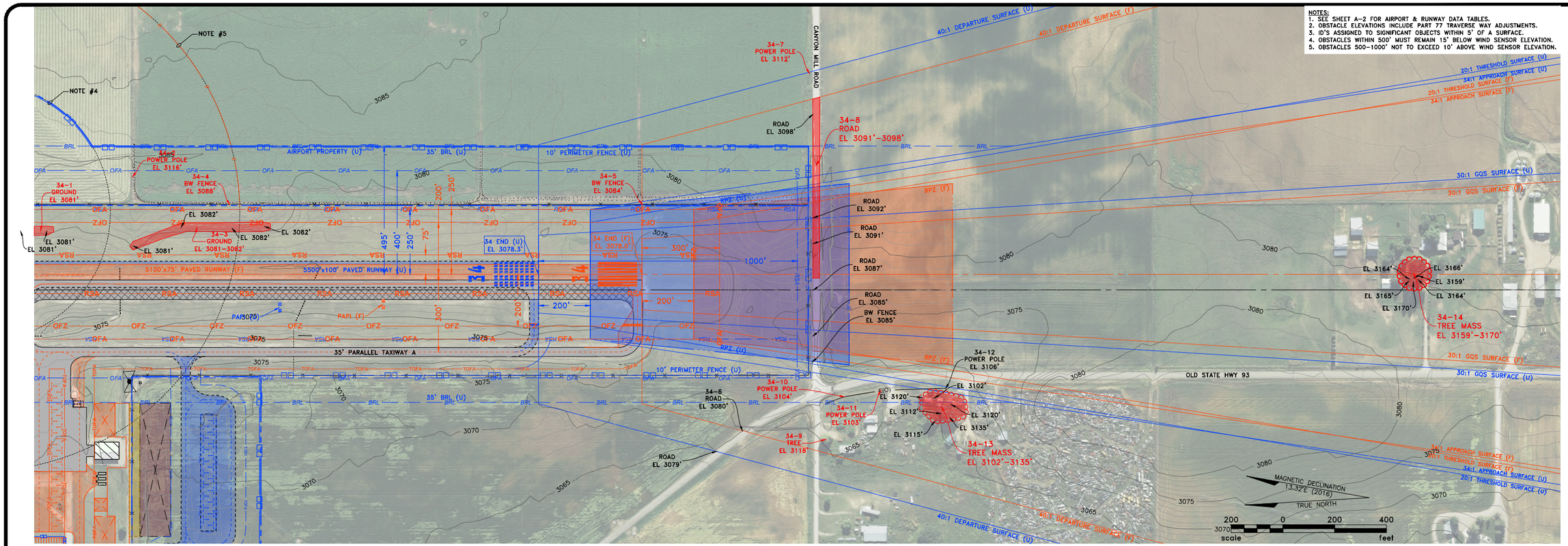
NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. OBSTACLE ELEVATIONS INCLUDE PART 77 TRAVERSE WAY ADJUSTMENTS.
3. ID'S ASSIGNED TO SIGNIFICANT OBJECTS WITHIN 5' OF A SURFACE.
4. OBSTACLES WITHIN 500' MUST REMAIN 15' BELOW WIND SENSOR ELEVATION.
5. OBSTACLES 500-1000' NOT TO EXCEED 10' ABOVE WIND SENSOR ELEVATION.



OBSTRUCTION TABLE

ID	DESCRIPTION	ELEVATION	FUTURE (F) PR	TR 7:1	TH 20:1	AP 34:1	GQS 30:1	DE 40:1	DISPOSITION	ULTIMATE (U) PR	TR 7:1	TH 20:1	AP 34:1	GQS 30:1	DE 40:1	DISPOSITION	TRIGGERING EVENT
34-1	GROUND	3081'	1.2'	–	–	–	–	–	REMOVED/GRADED	–	–	–	–	–	–	REMOVED	RWY REALIGNMENT PROJECT
34-2	POWER POLE	3116	–	18.4'	–	–	–	–	TO REMAIN	–	4.7'	–	–	–	–	TO REMAIN	–
34-3	GROUND	3081-3082'	1.9'-2.9'	–	–	–	–	–	REMOVED/GRADED	–	–	–	–	–	–	REMOVED	RWY REALIGNMENT PROJECT
34-4	BW FENCE	3088'	–	5.6'	–	–	–	–	TO BE REMOVED	–	–	–	–	–	–	REMOVED	LAND PURCHASE WILDLIFE FENCE
34-5	BW FENCE	3084'	–	3.1'	–	–	–	6.0'	TO BE REMOVED	–	–	–	–	–	–	REMOVED	LAND PURCHASE WILDLIFE FENCE
34-6	ROAD	3097'	–	(56.6')	–	–	–	(8.0')	TO REMAIN	–	(59.0')	–	–	–	(18.0')	TO REMAIN	–
34-7	POWER POLE	3112'	–	(44.7')	–	–	–	–	TO REMAIN	–	(47.9')	–	–	–	7.8'	TO REMAIN	–
34-8	ROAD	3091-3098'	–	–	(16.0-8.0')	(6.5'-0.5)	(15.0-9.0')	(3.6')-3.4'	TO REMAIN	–	–	(36.0-28.0')	(18.3-11.8')	(28.3-12.3')	(13.9-6.9')	TO REMAIN	–
34-9	TREE	3118'	–	(19.8')	–	–	–	22.0'	TO REMAIN	–	(23.3')	–	–	–	14.8'	TO REMAIN	–
34-10	POWER POLE	3104'	–	(10.5')	–	–	–	6.5'	TO REMAIN	–	(14.0')	–	–	–	(3.8')	TO REMAIN	–
34-11	POWER POLE	3103'	–	(9.3')	–	–	–	1.9'	TO REMAIN	–	(12.5')	–	–	–	(8.1')	TO REMAIN	–
34-12	POWER POLE	3106'	–	(7.2')	–	–	–	(1.5')	TO REMAIN	–	–	(40.5')	(12.9')	–	(11.8')	TO REMAIN	–
34-13	TREE MASS	3102-3135'	–	(16.5')-5.0'	–	–	–	(4.7')-26.6'	TO REMAIN	–	(18.2')-1.8'	–	–	–	(15.0')-16.5'	TO REMAIN	–
34-14	TREE MASS	3159-3170'	–	–	(59.6-47.2')	(1.8')-10.1'	(19.6-7.5')	3.4'-17.4'	TO REMAIN	–	–	(79.9-67.5')	(14.0-2.0')	(33.2-21.1')	(4.9)-7.0'	TO REMAIN	–

BASED ON OBSTRUCTION SURVEY DATED: JULY 2016

SURFACES: PR=PRIMARY, TR=TRANSITIONAL, TH=THRESHOLD, AP=PT 77 APPROACH, DE=DEPARTURE & GQS=GLIDEPATH QUALIFICATION

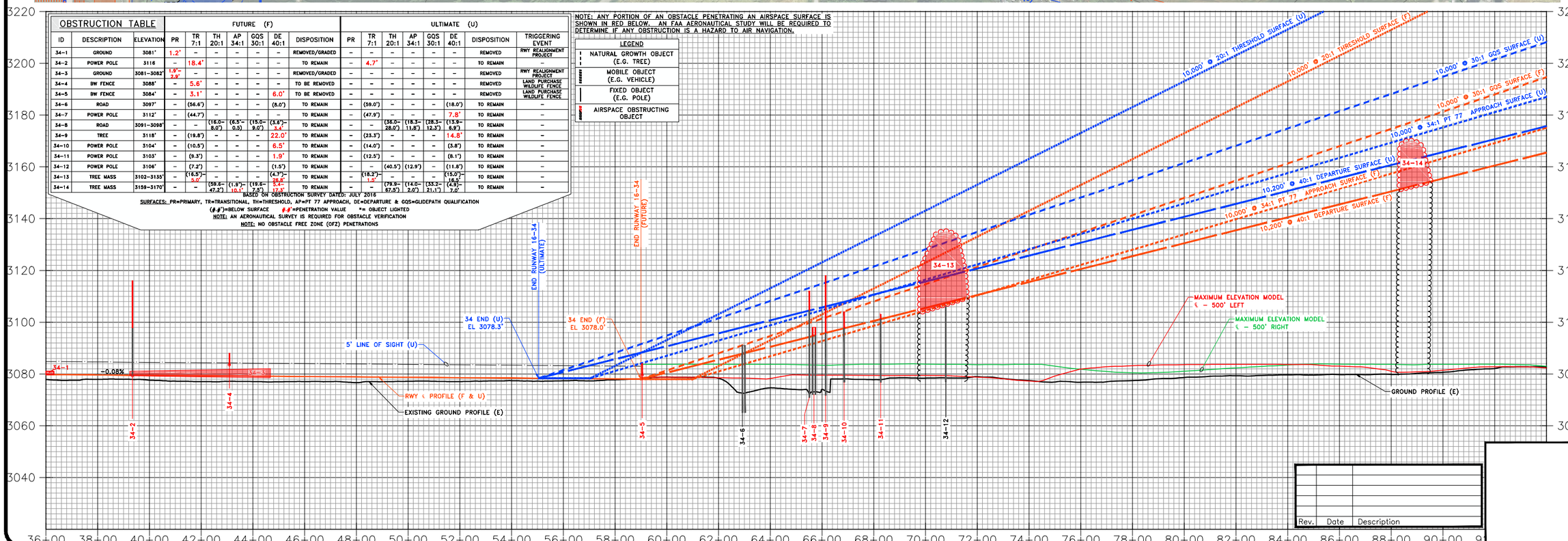
(#.#')=BELOW SURFACE #.#'=PENETRATION VALUE *= OBJECT LIGHTED

NOTE: AN AERONAUTICAL SURVEY IS REQUIRED FOR OBSTACLE VERIFICATION

NOTE: NO OBSTACLE FREE ZONE (OFZ) PENETRATIONS

NOTE: ANY PORTION OF AN OBSTACLE PENETRATING AN AIRSPACE SURFACE IS SHOWN IN RED BELOW. AN FAA AERONAUTICAL STUDY WILL BE REQUIRED TO DETERMINE IF ANY OBSTRUCTION IS A HAZARD TO AIR NAVIGATION.

LEGEND
- NATURAL GROWTH OBJECT (E.G. TREE)
- MOBILE OBJECT (E.G. VEHICLE)
- FIXED OBJECT (E.G. POLE)
- AIRSPACE OBSTRUCTING OBJECT



Rev.	Date	Description

RONAN AIRPORT

CITY OF RONAN AND LAKE COUNTY (OWNER)

RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

INNER PORTION OF THE APPROACH SURFACE RUNWAY 34 END (FUTURE & ULTIMATE)

DRAFTED MTK/TLG

REVIEWED BJM

PROJECT NUMBER 21515106

LAST REVISED DATE

SHEET A-10

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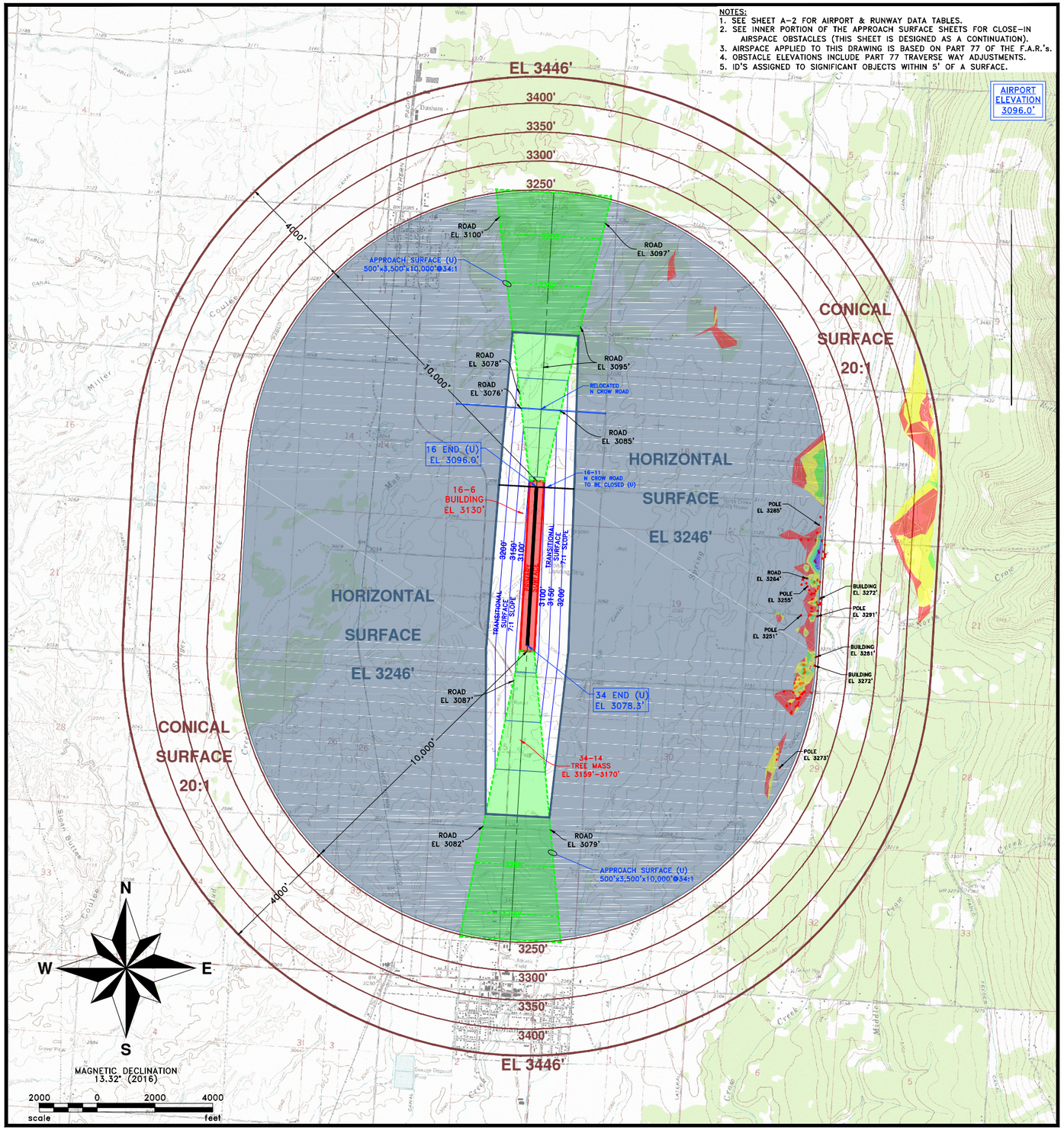
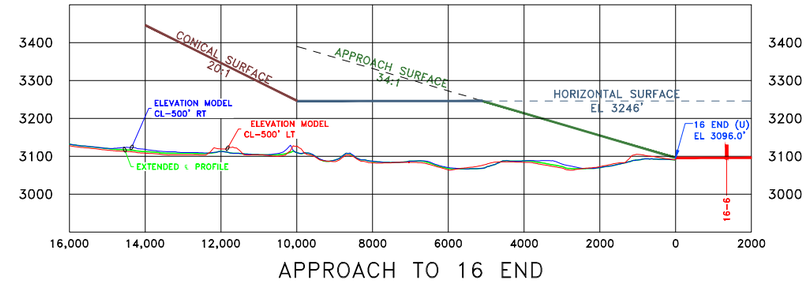
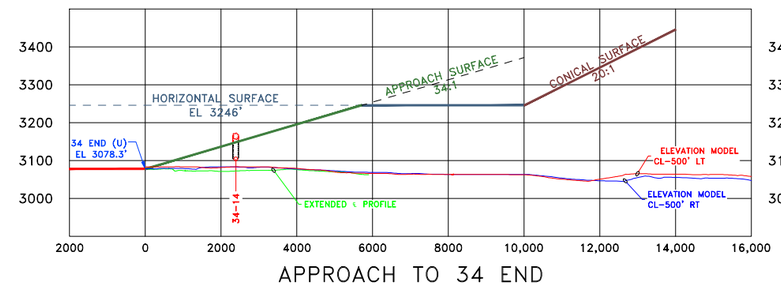
Apr 12, 2018 – 5:39pm – P:\Airport\MT\Ronan\Projects\21515106\CADD\ALP\21515106_InnerApproach.dwg (34 END (F&U))

NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. SEE INNER PORTION OF THE APPROACH SURFACE SHEETS FOR CLOSE-IN AIRSPACE OBSTACLES (THIS SHEET IS DESIGNED AS A CONTINUATION).
3. AIRSPACE APPLIED TO THIS DRAWING IS BASED ON PART 77 OF THE F.A.R.'s.
4. OBSTACLE ELEVATIONS INCLUDE PART 77 TRAVERSE WAY ADJUSTMENTS.
5. ID'S ASSIGNED TO SIGNIFICANT OBJECTS WITHIN 5' OF A SURFACE.





APPROACH TO 16 END



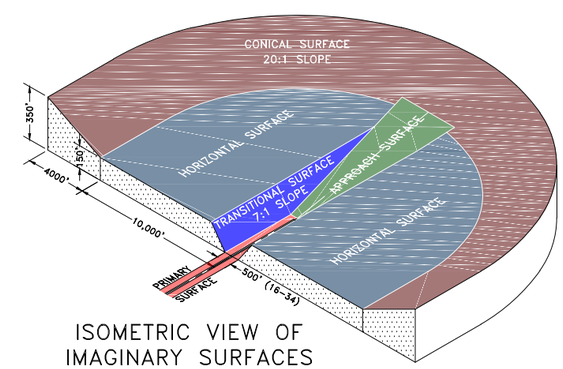
APPROACH TO 34 END

PART 77 AIRSPACE SCHEDULE OF OBSTACLES

OBSTACLE		CHARACTERISTICS				
ID	DESCRIPTION	ELEVATION (NAVD 88)	HEIGHT ABOVE GROUND LEVEL	PART 77 SURFACE	OBJECT PENETRATION	DISPOSITION
16-6	HISTORICAL BUILDING	3130'	40'	7:1 TRANSITIONAL	15.3'	TO REMAIN
34-14	TREE MASS	3170'	90'	34:1 APPROACH	(1.6')	TO REMAIN

#.#' = PENETRATES SURFACE (B) = BELOW SURFACE ** LIGHTING OF OBJECT REQUIRED
(OL) = OBJECT LIGHTED (U) = UNVERIFIED LIGHTING

OBSTACLE AREA LEGEND	
PENETRATION VALUE (FT)	COLOR
0-25	
25-50	
50-75	
75-100	
100-125	
125-150	



ISOMETRIC VIEW OF IMAGINARY SURFACES

KLJ

RONAN AIRPORT

CITY OF RONAN AND LAKE COUNTY (OWNER)

RONAN, MONTANA

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PART 77 AIRSPACE PLAN (ULTIMATE)

Rev.	Date	Description

DRAFTED MTK
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PROJECT NUMBER 21515106
LAST REVISED DATE

SHEET A-11

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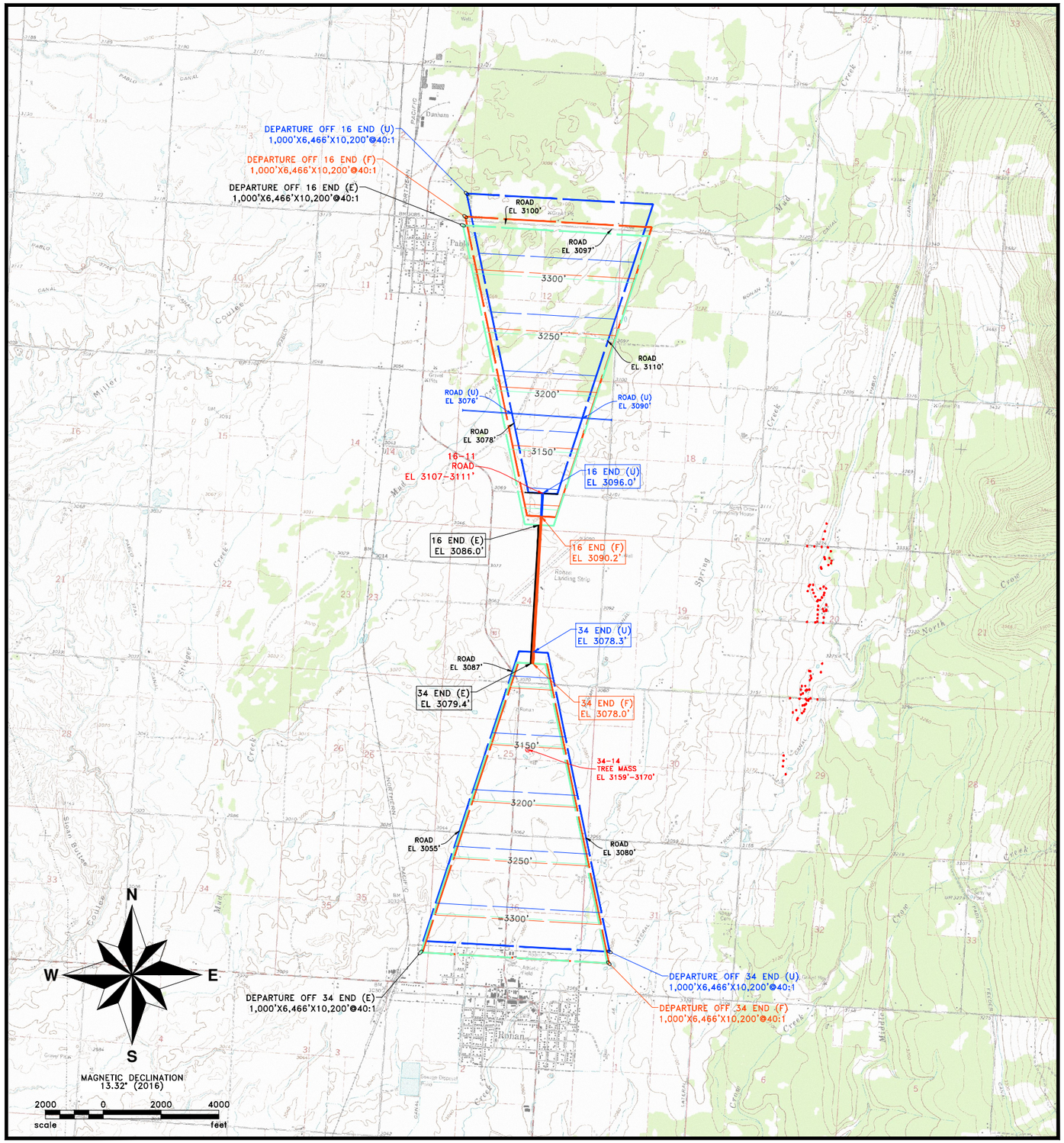

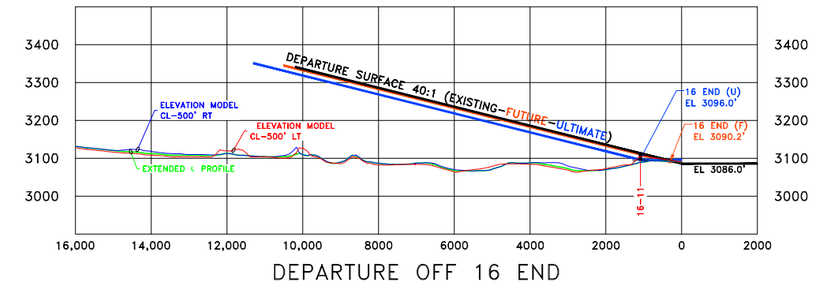

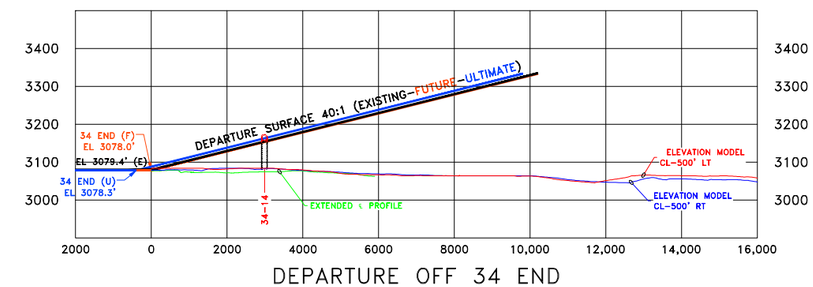

DEPARTURE OFF 16 END OBSTRUCTION CHART

OBSTACLE		CHARACTERISTICS			
ID	DESCRIPTION	PEAK ELEVATION	HEIGHT AGL	OBJECT PENETRATION	FUTURE DISPOSITION
16-11	ROAD	3111'	15	(2.3') Existing 1.2' Future N/A Ultimate	TO BE RELOCATED PRIOR TO 16 END ULTIMATE EXTENSION

(B)=BELOW SURFACE #.#'=PENETRATION VALUE

DEPARTURE OFF 34 END OBSTRUCTION CHART

OBSTACLE		CHARACTERISTICS			
ID	DESCRIPTION	PEAK ELEVATION	HEIGHT AGL	OBJECT PENETRATION	FUTURE DISPOSITION
34-14	TREE MASS	3170'	90'	16.1' Existing 17.5' Future 7.5' Ultimate	TO REMAIN

(B)=BELOW SURFACE #.#'=PENETRATION VALUE

NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. SEE INNER PORTION OF THE APPROACH SURFACE SHEETS FOR CLOSE-IN AIRSPACE OBSTACLES (THIS SHEET IS DESIGNED AS A CONTINUATION).
3. OBSTACLE ELEVATIONS INCLUDE PART 77 TRAVERSE WAY ADJUSTMENTS.
4. ID'S ASSIGNED TO SIGNIFICANT OBJECTS WITHIN 5' OF A SURFACE.

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RUNWAY DEPARTURE SURFACE

Rev.	Date	Description

DRAFTED MTK

REVIEWED BJM

PROJECT NUMBER 21515106

LAST REVISED DATE

SHEET A-12

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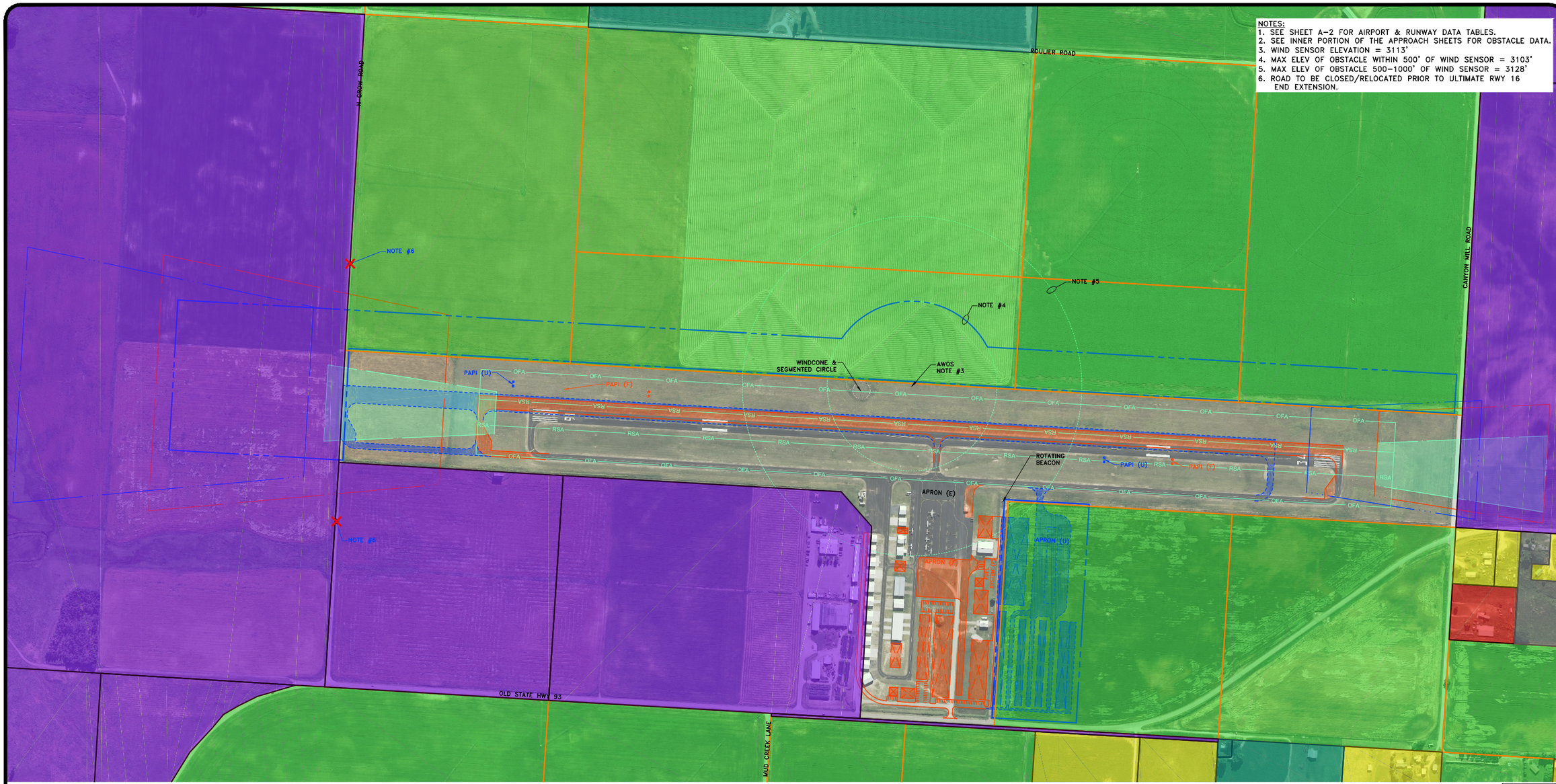
NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. SEE INNER PORTION OF THE APPROACH SHEETS FOR OBSTACLE DATA.
3. WIND SENSOR ELEVATION = 3113'
4. MAX ELEV OF OBSTACLE WITHIN 500' OF WIND SENSOR = 3103'
5. MAX ELEV OF OBSTACLE 500-1000' OF WIND SENSOR = 3128'
6. ROAD TO BE CLOSED/RELOCATED PRIOR TO ULTIMATE RWY 16 END EXTENSION.



LEGEND

EXISTING ZONING

- AGRICULTURE
- AERONAUTICAL*
- COMMERCIAL
- TRIBAL
- FARMSTEAD
- RESIDENTIAL
- INSTITUTIONAL
- VACANT

* RECOMMENDED THAT AERONAUTICAL BE EXPANDED TO INCLUDE ALL AIRPORT PROPERTY.

- LAND USE & AIRSPACE AVIGATION EASEMENT
- FUTURE AVIGATION EASEMENT
- FUTURE DEVELOPMENT
- ULTIMATE DEVELOPMENT
- EXISTING RPZ
- FUTURE RPZ
- ULTIMATE RPZ

- CITY BOUNDARY
- EXISTING AIRPORT PROPERTY
- FUTURE AIRPORT PROPERTY
- OFA — RUNWAY OBJECT FREE AREA (OFA)
- RSA — RUNWAY SAFETY AREA (RSA)

MAGNETIC DECLINATION 13.32°E (2016)
TRUE NORTH

300 0 300 600
scale feet

Rev.	Date	Description

RONAN AIRPORT

CITY OF RONAN AND LAKE COUNTY (OWNER)

RONAN, MONTANA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

LAND USE PLAN

DRAFTED TLG
REVIEWED BJM
PROJECT NUMBER 21515106
LAST REVISED DATE

SHEET A-13

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