

SAWYER COUNTY AIRPORT







AIRPORT MASTER PLAN





Meeting Agenda

- 1. Welcome/Introductions
- 2. Master Plan Process Update
- 3. Discussion of Phase II Report
 - Airport Development Alternatives
- 4. Next Steps
- 5. Open Discussion/Questions





Master Plan Process and Elements





SAWYER COUNTY AIRPORT







AIRPORT MASTER PLAN

CHAPTER 1
INVENTORY





Exhibit 1C: Existing Airside Facilities

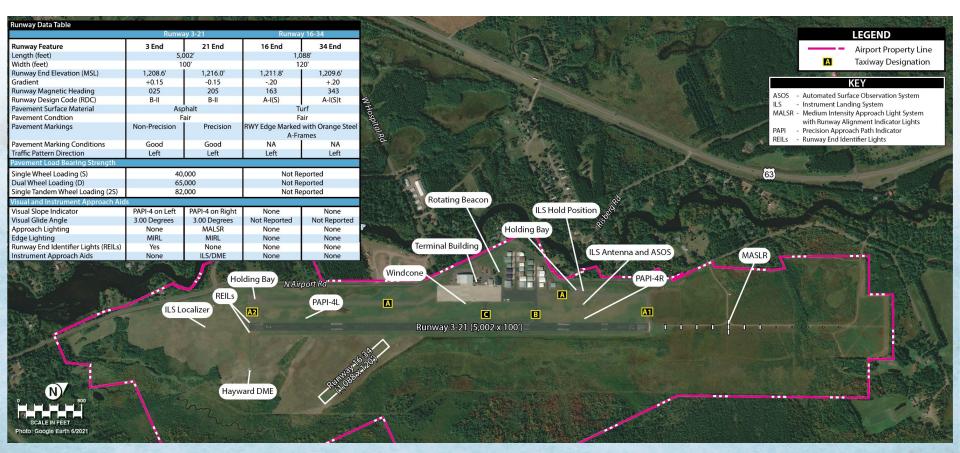






Exhibit 1E: Existing Landside Facilities







Exhibit 1G: Vicinity Airspace

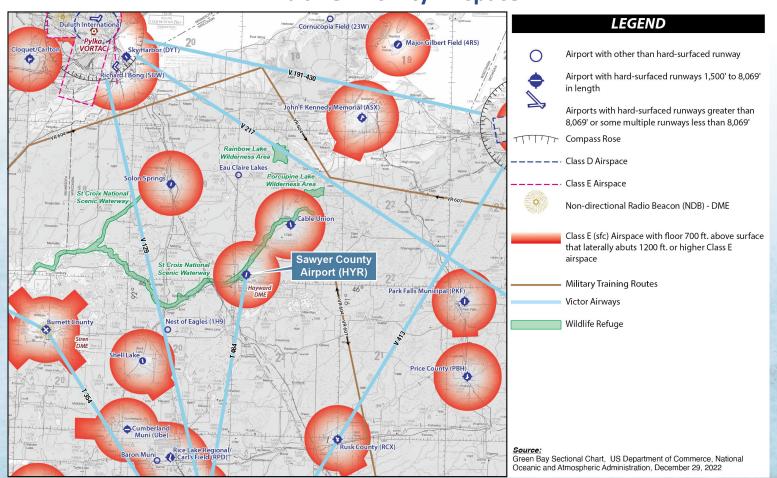






Exhibit 1J: Zoning

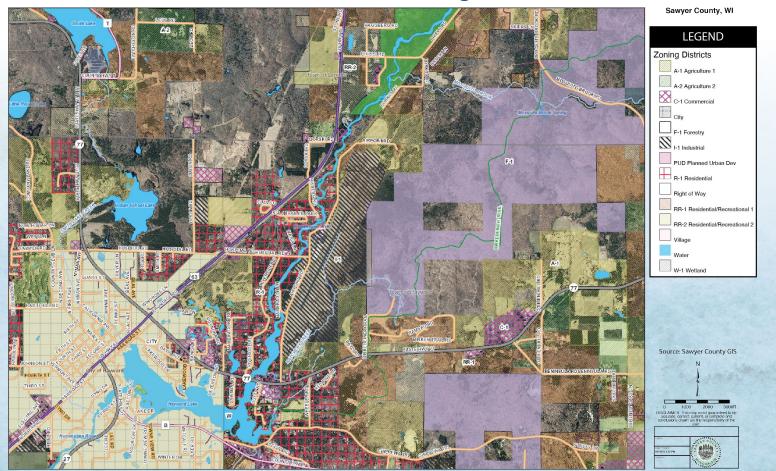
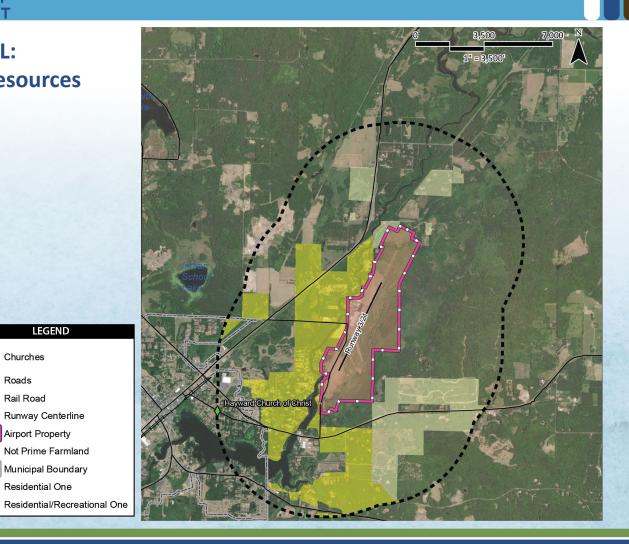




Exhibit 1L: Urban Resources

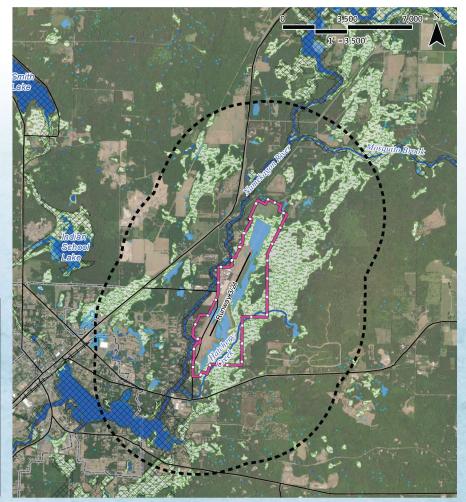
LEGEND

Churches Roads Rail Road Runway Centerline Airport Property Not Prime Farmland Municipal Boundary Residential One



AIRPORT MASTER PLAN

Exhibit 1M: Natural Resources







SAWYER COUNTY AIRPORT







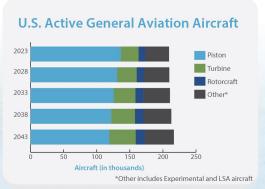
AIRPORT MASTER PLAN

CHAPTER 2
FORECASTS





Exhibit 2A: National General Aviation Forecasts





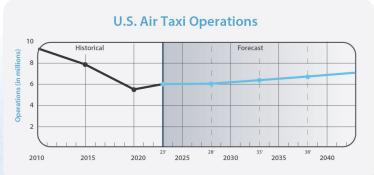














Exhibit 1H: Vicinity Airports

CABLE UNION (3CU)

Airport NPIAS Classification	General Aviation - Basic
Airspace Classification	Class G
Location from HYR	13 nm NE
Elevation	1,360' MSL
Weather Reporting	None
ATCT	No
Annual Operations (2021)	5,510
Based Aircraft (2021)	9
Enplaned Passengers (2021)	0

Runways	08-26 (2,194' x 150') - Turf 17-35 (3,709' x 75') - Asphalt
Lighting (highest intensity)	MIRL
Marking (highest precision)	Non-Precision
Approach Aids	None
Instrument Approaches	RNAV (GPS)
C ' D 'I I E I /400II'	

Services Provided: Fuel (100LL)

SOLON SPRINGS MUNICIPAL (OLG)



Airport NPIAS Classification .	General Aviation - Basic
Airspace Classification	Class G
Location from HYR	23.3 nm NW
Elevation	1,102' MSL
Weather Reporting	ASOS-3
ATCT	No
Annual Operations (2021)	4,525
Based Aircraft (2023)	15
Enplaned Passengers (2021).	0

Runway	01-19 (3,099' x 60') - Asphalt	
Lighting (highest intensity)	MIRL	
Marking (highest precision)	Non-Precision	
Approach Aids	PAPI-2L, REILs	
Instrument Approaches	RNAV (GPS)	
Services Provided: Fuel (100LL), Instruction		

SHELL LAKE MUNICIPAL (SSQ)



irport NPIAS Classification General Aviation - Basic
irspace Classification
ocation from HYR 26.6 nm SW
levation
Veather Reporting None
TCT No
nnual Operations (2021)
ased Aircraft (2023)
nplaned Passengers (2021)

	Runway	14-32 (3,711' x 75') - Asphalt
ı	Lighting (highest intensity)	MIRL
	Marking (highest precision)	Non-Precision
	Approach Aids	PAPI-2L, REILs
	Instrument Approaches	RNAV (GPS)
ı	Services Provided None	

	KEY						
	AWOS	Automated Weather Observation System	PAPI	Precision Approach Path Indicator	RNAV	-	Area Navigation
	ASOS	Automated Surface Observation System	REIL	Runway End Identification Lights	GPS		Global Positioning System
	NPIAS	National Plan of Integrated Airport Systems	MALS	Medium Intensity Approach Lighting System	RNP		Required Navigation Performance
	ATCT	Airport Traffic Control Tower	MALSF	thm:medium:med	VOR		Very High Frequency Omnidirectional Range
	HIRL	High Intensity Runway Lighting	ILS	Instrument Landing System	DME		Distance Measuring Equipment
3	MIRL	Medium Intensity Runway Lighting	LOC	Localizer	nm	١	Nautical Miles





Exhibit 1H: Vicinity Airports

JOHN F KENNEDY MEMORIAL (ASX)



Airport NPIAS Classification	General Aviation - Local
Airspace Classification	Class G
Location from HYR	38.3 nm NE
Elevation	827' MSL
Weather Reporting	ASOS
ATCT	No
Annual Operations (2022)	10,525
Based Aircraft (2021)	25
Enplaned Passengers (2021)	0

	02-20 (5,197' x 100') - Asphalt 13-31 (3,498' x 75') - Asphalt
Lighting (highest intensity)	MIRL
Marking (highest precision)	Non-Precision
Approach Aids	PAPI-4L, REILs
Instrument Approaches	ILS/LOC, RNAV (GPS)

Services Provided: Fuel (100LL & JetA)

RICE LAKE REGIONAL / CARL'S FIELD (RPD)



Airport NPIAS Classification	General Aviation - Local
Airspace Classification	Class G
Location from HYR	38.9 nm SW
Elevation	1,109' MSL
Weather Reporting	AWOS-3
ATCT	No
Annual Operations (2021)	27,650
Based Aircraft (2020)	34
Enplaned Passengers (2021)	0

Runways	01-19 (6,700' x 100') Asphalt 13-31 (3,500' x 75') Asphalt	
Lighting (highest intensity)	HIRL, MALSR	
Marking (highest precision)	Precision	
Approach Aids	PAPI-4L, REILs	
Instrument Approaches	ILS/LOC, RNAV (GPS)	
Services Provided: Fuel (100LL & JetA), Charter, Instruction,		
Rental, Sales		

RICHARD I BONG (SUW)



	Runways	14-32 (4,001' x 75') - Asphalt
ı	Lighting (highest intensity)	MIRL
	Marking (highest precision)	Non-Precision
	Approach Aids	PAPI-4L, REILs
	Instrument Approaches	RNAV (GPS)
_	0 1 0 11 1 = 1/1-11	

Services Provided: Fuel (100LL & JetA), Parachute Jumping, Instruction, Rental

			KEY			
AWOS	Automated Weather Observation System	PAPI	Precision Approach Path Indicator	RNAV	1	Area Navigation
ASOS	Automated Surface Observation System	REIL	Runway End Identification Lights	GPS		Global Positioning System
NPIAS	National Plan of Integrated Airport Systems	MALS	Medium Intensity Approach Lighting System	RNP		Required Navigation Performance
ATCT	Airport Traffic Control Tower	MALSF	$Medium\ Intensity\ Approach\ Lighting\ System\ with\ Sequenced\ Flashing\ Lights$	VOR		Very High Frequency Omnidirectional Range
HIRL	High Intensity Runway Lighting	ILS	Instrument Landing System	DME		Distance Measuring Equipment
MIRL	Medium Intensity Runway Lighting	LOC	Localizer	nm	١	Nautical Miles



Exhibit 2B: Service Area



- Registered Aircraft
- Based Aircraft

NPIAS Airport

Sawyer County Airport

30-Minute Drive Time

Based & Registered Aircraft Counts									
Distance From Based Aircraft FAA Registered									
HYR	Count	Aircraft Count							
0 - 10nm	17	23							
10 - 20nm	0	19							
20 - 30nm	3	58							
Total	29*	100							
*9 Based aircraft registe	red to addresses heven	d 30nm from HVR							

*9 Based aircraft registered to addresses beyond 30nm from HYR

*4 Additional based aircraft are considered part time

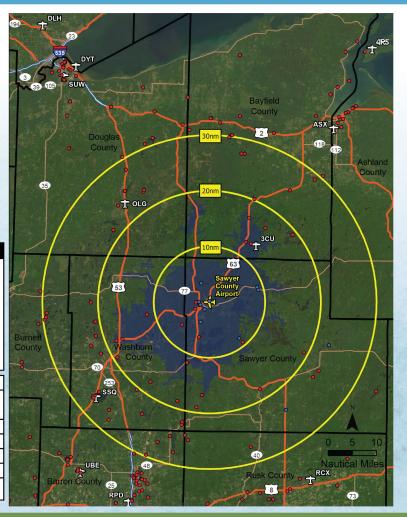






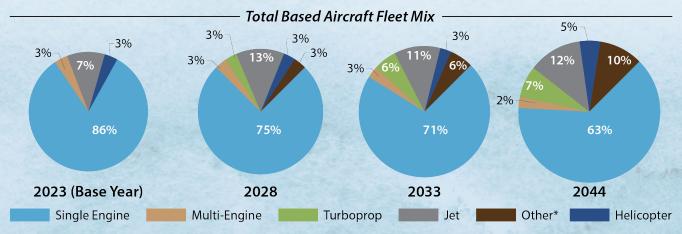
Exhibit 2H: Forecast Summary

	BASE YEAR	2028	2033	2043
ANNUAL OPERATIONS				
Itinerant				
Air Carrier	-	-	-	-
Other Air Taxi	252	290	350	480
General Aviation	6,201	7,600	8,600	10,900
Military	100	100	100	100
Total Itinerant	6,553	8,000	9,100	11,500
Local				
General Aviation	3,622	4,200	4,600	5,500
Military	-	-	-	-
Total Local Operations	3,622	4,200	4,600	5,500
Total Annual Operations	10,175	12,200	13,700	17,000
AIAs	730	895	1,013	1,284
PEAKING				
Total Annual Operations	10,175	12,200	13,700	17,000
Peak Month	1,018	1,220	1,370	1,700
Design Day	33	39	44	55
Design Hour	5	6	7	8
Busy Day	41	49	54	66
Dusy Day	41	49	54	00



Exhibit 2H: Forecast Summary

	BASE YEAR	2028	2033	2043
BASED AIRCRAFT				
Single Engine	25	24	25	26
Multi-Engine	1	1	1	1
Turboprop	0	1	2	3
Jet	2	4	4	5
Helicopter	1	1	1	2
Other	0	1	2	4
Total HYR Based Aircraft	29	32	35	41



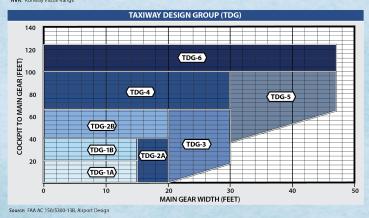
^{*}Other includes LSA and Experimental Aircraft Source: Airport records; Coffman Associates analysis





Exhibit 2J: Aircraft Classification Parameters

	AIRCRAFT APPROACH CATE	GORY (AAC)						
Category Approach Speed								
A	less than	91 knots						
В	91 knots or more but	t less than 121 knots						
С	121 knots or more bu	it less than 141 knots						
D	141 knots or more bu	it less than 166 knots						
E	166 knots	s or more						
	AIRPLANE DESIGN GROU	JP (ADG)						
Group #	Tail Height (ft)	Wingspan (ft)						
1	<20	<49						
II I	20-<30	49-<79						
III	30-<45	79-<118						
IV	45-<60	118-<171						
V	60-<66	171-<214						
VI	66-<80	214-<262						
	VISIBILITY MINIMU	IMS						
RVR* (ft)	Flight Visibility Cate	egory (statute miles)						
VIS	3-mile or greater v	visibility minimums						
5,000	Not lower	than 1-mile						
4,000	Lower than 1-mile but	not lower than ¾-mile						
2,400		not lower than ½-mile						
1,600	Lower than ½-mile but	not lower than ¼-mile						
1,200	Lower that	an ¼-mile						
*RVR: Runway Visual Range								



A-I	Aircraft	TDG
	Beech Boron 55 Beech Bonanza Cessna 150, 172 Eclipse 500 Piper Archer, Seneca	1A 1A 1A 1A
B-I	Beech Baron 58 Beech King Air 90 Cessna 421 Cessna Citation CJ1 Cessna Citation 1 Embraer Phenom 100	1A 1A 1A 1A 2A 1B
A/B-II 12,500 lbs.	Beech Super King Air 200 Cessna 441 Conquest Cessna Citation CJ2 Pilatus PC-12	2A 1A 2A 1A
B-II over 12,500 lbs.	Beech Super King Air 350 Cessna Citation CI3,V Cessna Citation Bravo Cessna Citation Bravo Cessna Citation CJ4 Cessna Citation Latitude/Longitude Embraer Phenom 300 Folcon 10, 20, 50 Folcon 900, 2000 Held 100, 2000 Folcon 900, 2000 Folcon 900 F	2A 2A 1A 1B 1B 1B 1B 2A
A/B-III	 Hawker 800/850, 4000 Pilatus PC-24 Bombardier Dash 8 Bombardier Global 5000, 	1B 1B
	6000, 7000, 8000 • Falcon 6X, 7X, 8X	2B 2B

TDG: Taxiway Design Group







Exhibit 2K: Historical Jet and Turboprop Operations

AIRPORT REFERENCE CODE (ARC) SUMMARY

ARC	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
A-I	22	18	30	48	30	30	44	24	40	34	20
A-II	14	20	44	32	20	42	30	38	66	46	66
B-I	326	288	338	280	196	174	150	106	104	70	96
B-II	558	470	514	642	598	596	556	506	592	496	430
B-III	4	0	16	22	2	14	76	82	62	54	112
C-I	56	60	46	50	30	94	90	18	30	36	34
C-II	188	172	194	158	180	178	190	210	208	208	248
C-IV	0	2	0	0	0	0	0	2	0	0	0
D-I	8	2	2	4	8	0	0	0	2	0	0
D-II	20	18	4	12	8	4	16	12	18	18	22
D-III	0	0	2	0	2	4	0	2	6	0	0
E-I	2	0	0	0	0	0	0	0	4	0	0
TOTAL	1,198	1,050	1,190	1,248	1,074	1,136	1,152	1,000	1,132	962	1,028





Exhibit 2K: Historical Jet and Turboprop Operations

APPROACH CATEGORY

AC	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
А	36	38	74	80	50	72	74	62	106	80	86
В	888	758	868	944	796	784	782	694	758	620	638
С	244	234	240	208	210	272	280	230	238	244	282
D	28	20	8	16	18	8	16	14	26	18	22
E	2	0	0	0	0	0	0	0	4	0	0
TOTAL	1,198	1,050	1,190	1,248	1,074	1,136	1,152	1,000	1,132	962	1,028

DESIGN GROUP

	DG	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
11.00	I	414	368	416	382	264	298	284	148	180	140	150
	II	780	680	756	844	806	820	792	766	884	768	766
	III	4	0	18	22	4	18	76	84	68	54	112
	IV	0	2	0	0	0	0	0	2	0	0	0
	TOTAL	1,198	1,050	1,190	1,248	1,074	1,136	1,152	1,000	1,132	962	1,028



SAWYER COUNTY AIRPORT







AIRPORT MASTER PLAN

CHAPTER 3
AIRPORT FACILITY REQUIREMENTS



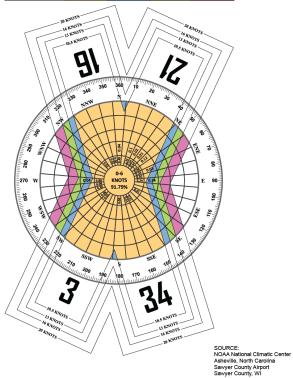


Exhibit 3B: Windroses

52,930 All Weather Observations

Jan. 1, 2013 - Dec, 31 2022

ALL WEATHER WIND COVERAGE										
Runways 10.5 Knots 13 Knots 16 Knots 20 Knots										
Runway 3-21	98.69%	99.51%	99.95%	100.00%						
Runway 16-34 97.01% 98.80% 99.81% 99.989										
All Runways										



IFR WIND COVERAGE									
Runways	10.5 Knots	16 Knots	20 Knots						
Runway 3-21	99.02%	99.62%	99.94%	99.99%					
Runway 16-34	96.87%	98.69%	99.76%	99.96%					
All Runways	99.60%	99.88%	99.98%	99.99%					

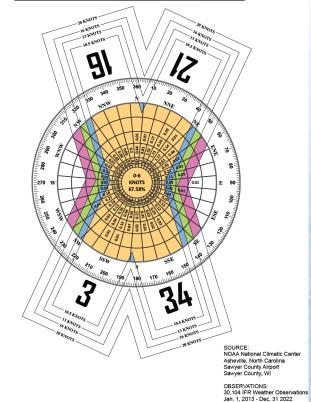






Exhibit 3C: Existing Safety Areas

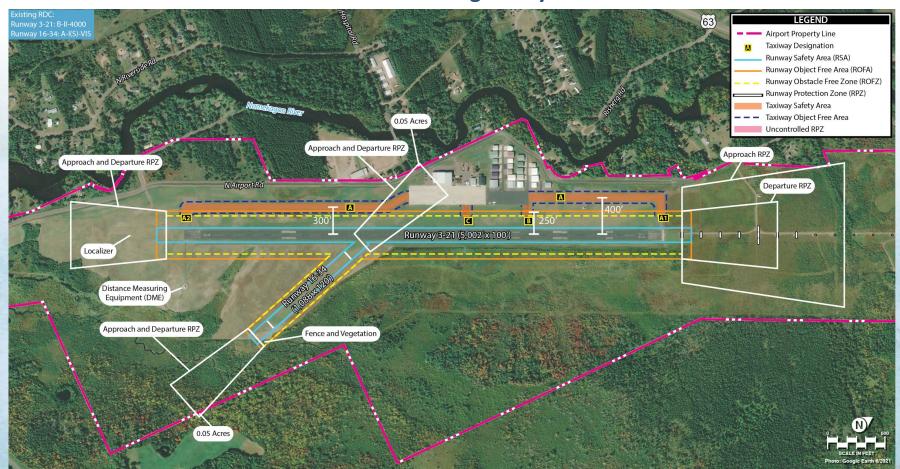






Exhibit 3D: Airside Facility Requirements

Category	Existing	Future	Ultimate	Existing/Ultimate
Runways	3-21	3-21	3-21	16-34
Runway Design Code (RDC)	B-II-4000	C-II-4000	D-III-4000	A-I(S)-VIS
Dimensions	5,002' x 100'	Consider extension; maintain width	Consider extension; maintain width	1,088' X 120'
Pavement Strength	40,000 lbs S 65,000 lbs D 82,000 lbs 2S	Maintain	Maintain	Turf - Maintain; consider 12,500 S if paved
Safety Areas				
Runway Safety Area (RSA)	150-feet-wide by 300 feet beyond end (meets standard)	400/500-feet-wide by 1,000 feet beyond end (Obstructions include localizer, vegetation, and grading)	500- feet-wide by 1,000 feet beyond end (Obstructions include localizer, vegetation, and grading)	120-feet-wide by 240 feet beyond end (Obstructions include vegetation, fence, Runway 3-21 safety areas)
Runway Object Free Area (ROFA)	500-feet-wide by 300 feet beyond end (meets standard)	800-feet-wide by 1,000 feet beyond end (Obstructions include localizer and vegetation)	800-feet-wide by 1,000 feet beyond end (Obstructions include localizer and vegetation)	250-feet-wide by 240 feet beyond end (Obstructions include vegetation and Runway 3-21 safety areas)
Runway Obstacle Free Zone (ROFZ)	400-feet-wide by 200 feet beyond end (meets standard)	Maintain	Maintain	250-feet-wide by 240 (Obstructions include vegetation and Runway 3-21 safety areas)
Runway Protection Zone (RPZ)	Portion of Runway 3 approach/Runway 21 departure RPZ contain public road (N. Airport Road)	Runway 3 approach/Runway 21 departure RPZ will increase in size (Obstructions include N. Airport Road)	Runway 3 approach/Runway 21 departure RPZ will increase in size (Obstructions include N. Airport Road)	(Runway 16 appoach/34 departure obstructions include hangar)
Taxiways				
Design Group	2A	2B	2B	N/A
Parallel Taxiway Separation from Runway	300 feet (south poriton of Taxiway A); 400 feet (north portion of Taxiway A); (meets standard)	Maintain existing 300 feet minimum separation	Standards increase to 400 feet of separation; south portion of Taxiway A will require 100-foot shift	N/A
Widths	35-feet-wide (Taxiway A, A1, A2, B); 50-feet-wide (Taxiway C); (meets standard)	Maintain existing width for all 35 foot wide taxiways; evaluate Taxiway C width exceeds standard	Maintain existing width for all 35 foot wide taxiways; evaluate Taxiway C width exceeds standard	N/A
Holding Position Separation	250 feet (meets standard)	Maintain	262 feet (increase in separation)	N/A
Notable Conditions	Direct runway access from Taxiway C and B; holding bays do not meet separation standards	Consider corrective measures	Consider corrective measures	N/A

KEY

ASOS - Automated Surface Observation Station

- Dual Wheel Loading

LS - Instrument Landing System

LOC - Localizer

MALSR - Medium Intensity Approach Lighting System

with Runway Alignment Indicator Lights

MIRL - Medium Intensity Runway Lighting
MITL - Medium Intensity Taxiway Lighting

RNAV - Area Navigation
S - Single Wheel Loading

2S - Single Wheel Loading

PAPI - Precision Approach Path Indicator

- Runway End Identification Lights





Figure 3A: ROFA

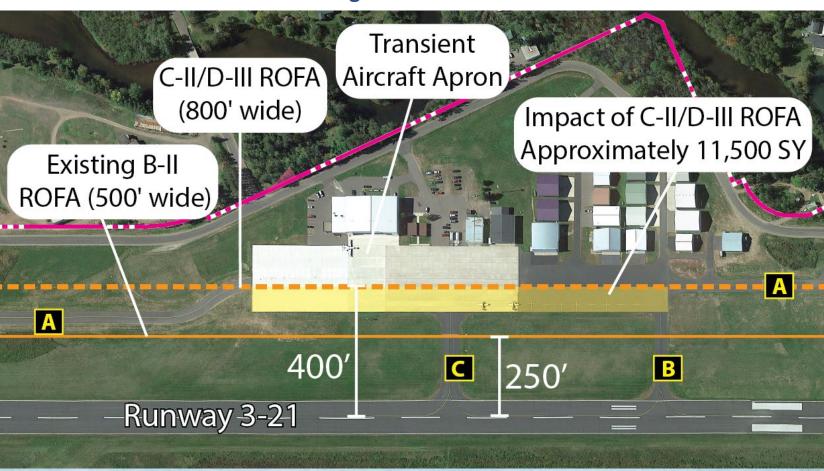




Exhibit 3D: Airside Facility Requirements

Category	Existing	Future	Ultimate	Existing/Ultimate			
Runways	3-21	3-21	3-21	16-34			
Navigational and Weather Aids							
Instrument Approaches	ILS or LOC (Runway 21); RNAV (Runway 3-21)	Maintain	Maintain	N/A			
Weather Aids	ASOS, wind cone, rotating beacon	Maintain	Maintain	Maintain			
Approach Aids	PAPI-4 (Runway 3-21); REIL (Runway 3); MALSR (Runway 21)	Maintain	Maintain	N/A			
Lighting and Marking							
Runway Lighting	MIRL	Maintain	Maintain	N/A			
Runway Marking	Non-precision (Runway 3); Precision (Runway 21)	Maintain	Maintain	N/A			
Taxiway Lighting	MITL (Taxiway A, A1, A2); Retroreflective markers (Taxiway C, B)	Add MITL for Taxiway B and C	Add MITL for Taxiway B and C	N/A			
		ASOS - Automated Surface Observation Station D - Dual Wheel Loading ILS - Instrument Landing System LOC - Localizer	MALSR - Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights MIRL - Medium Intensity Runway Lighting MITL - Medium Intensity Taxiway Lighting	PAPI - Precision Approach Path Indicator REIL - Runway End Identification Lights RNAV - Area Navigation S - Single Wheel Loading 2S - Single Tandem Wheel Loading			





Exhibit 3E: Landside Facility Requirements



Aircraft Parking Apron







Exhibit 3E: Landside Facility Requirements





SAWYER COUNTY AIRPORT







AIRPORT MASTER PLAN

CHAPTER 4
AIRPORT DEVELOPMENT ALTERNATIVES





Exhibit 4A: Airside Alternative 1

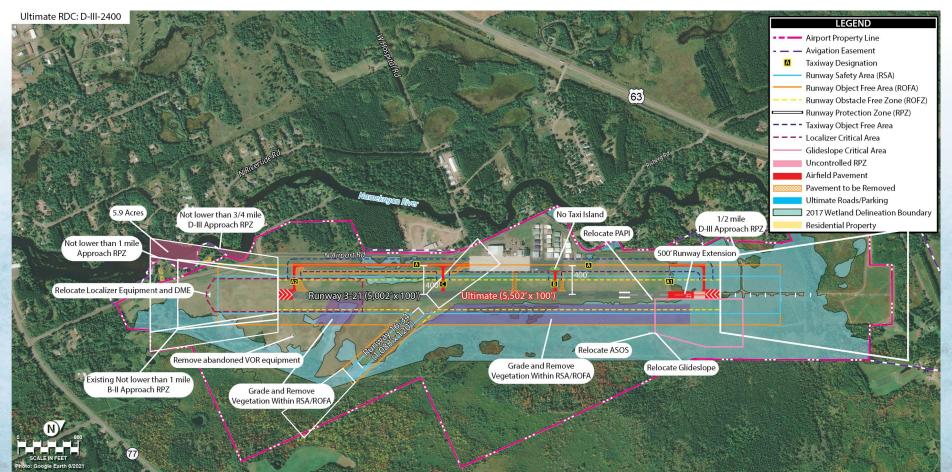






Exhibit 4B: Airside Alternative 2

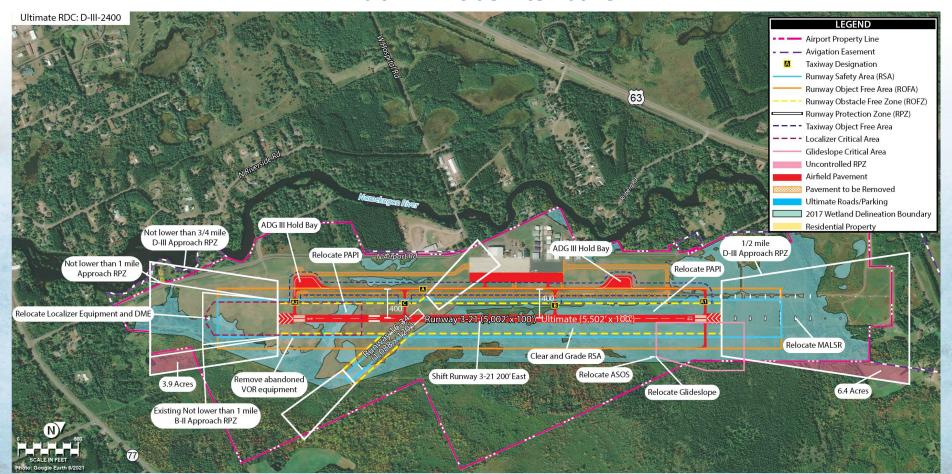






Exhibit 4C: Airside Alternative 3

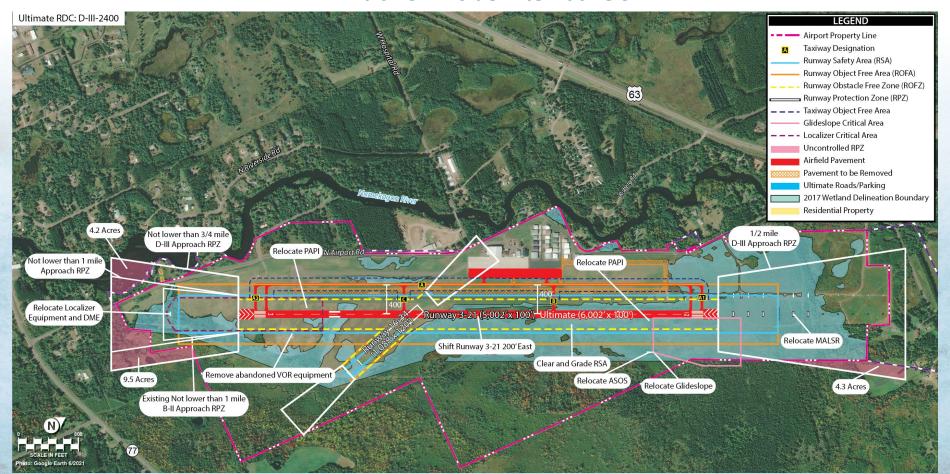






Exhibit 4D: Airside Alternative 4

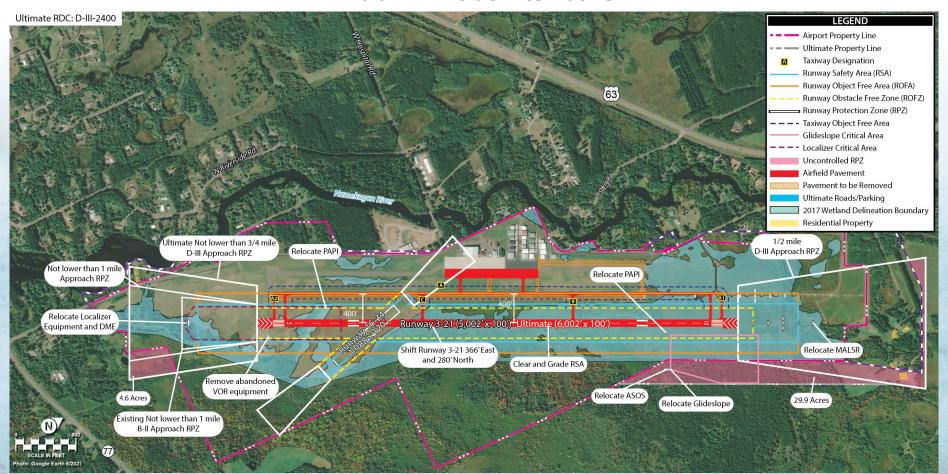






Exhibit 4E: Landside Alternative 1

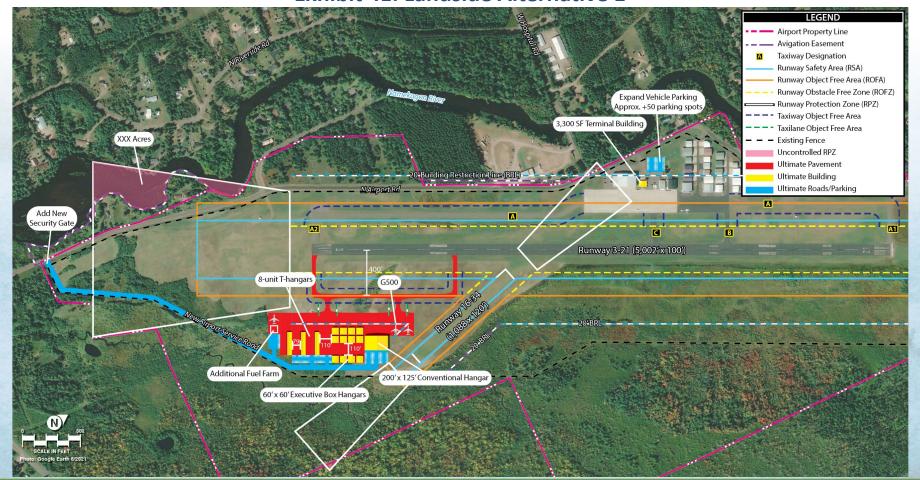






Exhibit 4F: Landside Alternative 2

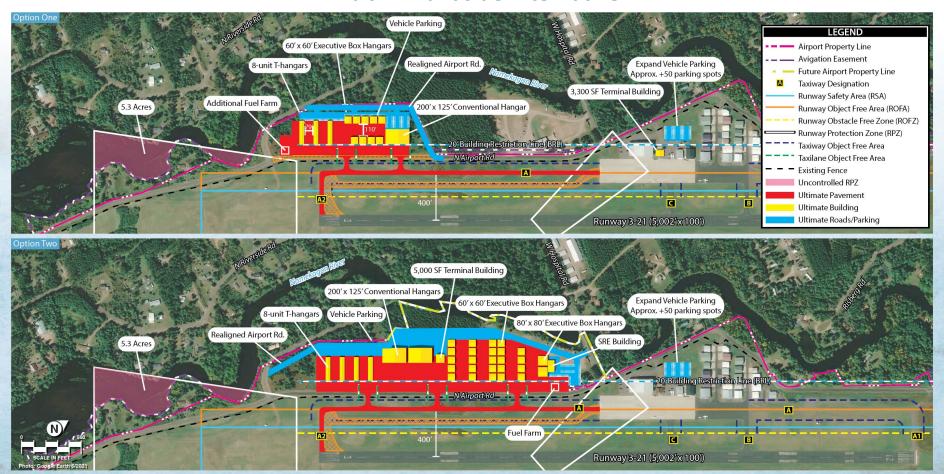






Exhibit 4G: Landside Alternative 3

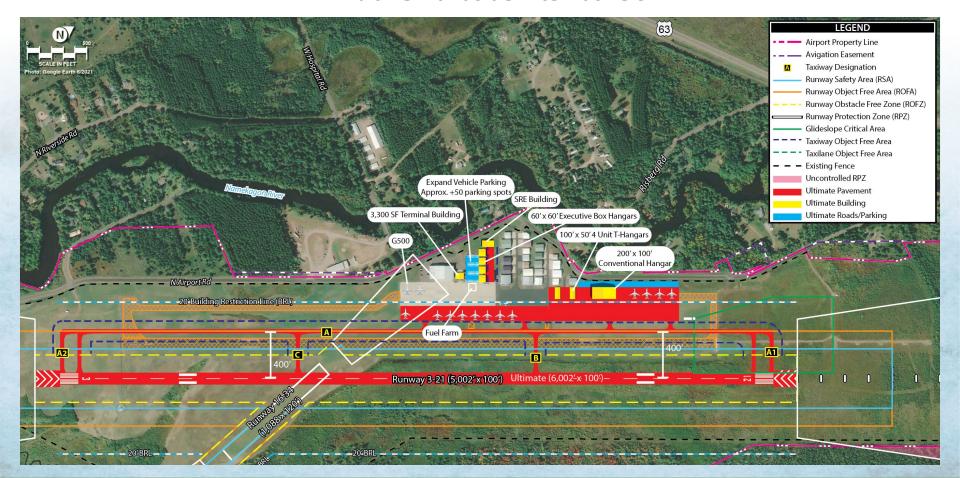
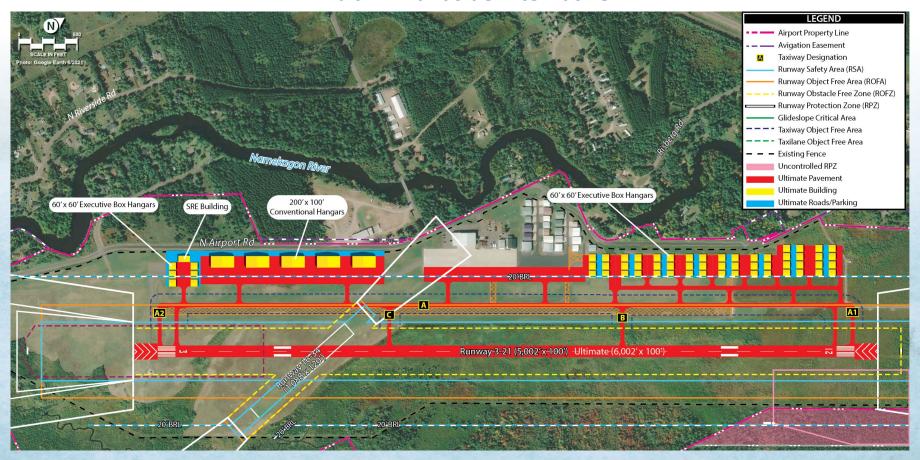






Exhibit 4H: Landside Alternative 4







— NEXT STEPS

- Phase 3 Elements Recommended Plan
- ▶ PAC Meeting #4 September/October timeframe; draft documents available for review approx. one week prior to meeting
- ▶ **Public Information Workshop #2** held same day as PAC meeting #3; we encourage you to invite your associates and members of the public
- Phase 4 Elements Begin work on Recommended Plan, Land use Compatibility, Financial Management, and Development Program following PAC meeting #3 and discussion with group





QUESTIONS?

We want to hear from you!

Direct any questions or comments after this meeting to Mike Dmyterko with Coffman Associates at 602-993-6999 or mdmyterko@coffmanassociates.com or visit the project website to submit comments online.

https://sawyercounty.airportstudy.net/