

SKYHAVEN AIRPORT MASTER PLAN UPDATE
EXECUTIVE SUMMARY

2010



Prepared for:



New Hampshire DOT

Prepared by:

JACOBS™

In Association with

The Smart Associates

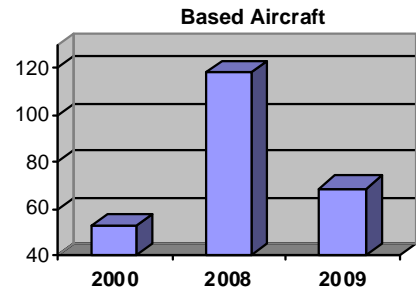
INVENTORY

- Skyhaven Airport is designated by the Federal Aviation Administration (FAA) and the New Hampshire Department of Transportation (NHDOT) as a General Aviation (GA) airport.
- The single paved runway (15-33) is 4,001' long x 100' wide, with a full parallel taxiway. The runway is lighted and marked, and FAA recently published a new GPS instrument approach to Runway 33.
- The Pease Development Authority took over ownership of Skyhaven Airport from NHDOT in July 2009. The PDA is responsible for day-to-day airport operations and management.

- The existing critical design aircraft is the multi-engine piston Raytheon (Beech) Baron 58, which is representative of a group of aircraft in Airport Reference Code (ARC) B-I. The airport can accommodate aircraft as large as the Beech King Air 200, Cessna Citation CJ-3, and other aircraft in ARC B-II. Skyhaven Airport meets or exceeds most of the current FAA design criteria for ARC B-I, although there are penetrations to some imaginary surfaces on and in the vicinity of the airport.



- Based aircraft increased from 53 in 2000 to 118 in 2008, in part due to the presence of Ossipee Valley Aviation, the former FBO. The number of based aircraft declined to approximately 69 in early 2010.
- Estimated aircraft operations have decreased by approximately 8% since 2000, and the sale of both 100LL aviation fuel and Jet-A fuel have also declined. Jet-A is not currently available for sale at the airport.



- Flight tracking data shows 22 instrument operations were conducted by turboprop and jet aircraft at Skyhaven Airport between July 1, 2007 and June 30, 2008.
- Ossipee Valley Aviation was the Fixed Base Operator between 2001-2008. At the time of this report, an aircraft mechanic has begun operation and the airport is performing other FBO duties such as fuel sales and tie-down rentals.

A summary of airport facilities and activity levels is presented in Table 1, and the Existing Airport Layout Plan is shown in Figure 1.

Table 1

**Summary of Airport Facilities and Activity Levels - 2008
Skyhaven Airport (DAW)**

Airport Reference Code (ARC)	B-I
Critical Design Aircraft	Raytheon (Beech) Baron 58
FAA NPIAS + NH SASP Role	General Aviation
Elevation above sea level	322'
Mean maximum temperature	83°F
Area (acres)	195 +/-
Based Aircraft - Total	118
Single Engine Piston	97
Multi Engine Piston	6
Turboprop	0
Jet	1
Helicopter	2
Ultralight	12
Runway 15-33 (paved)	4,001'x100'
Medium intensity runway lights; Runway 33 – PAPI, REIL	
Aircraft Operations Per Year (estimated)	17,000
Average Aircraft Operations Per Day (estimated)	46
Annual Service Volume (Operational Capacity)	230,000
Hourly Capacity - Operations	86
Non-precision instrument approach	Runway 33
Lowest instrument approach minimums	305' HAT & 1 mile
Visual Runway	Runway 15
Air Traffic Control Tower	No
Unicom Radio (122.7 MHz)	Yes
Automated Surface Observing System (ASOS)	Yes

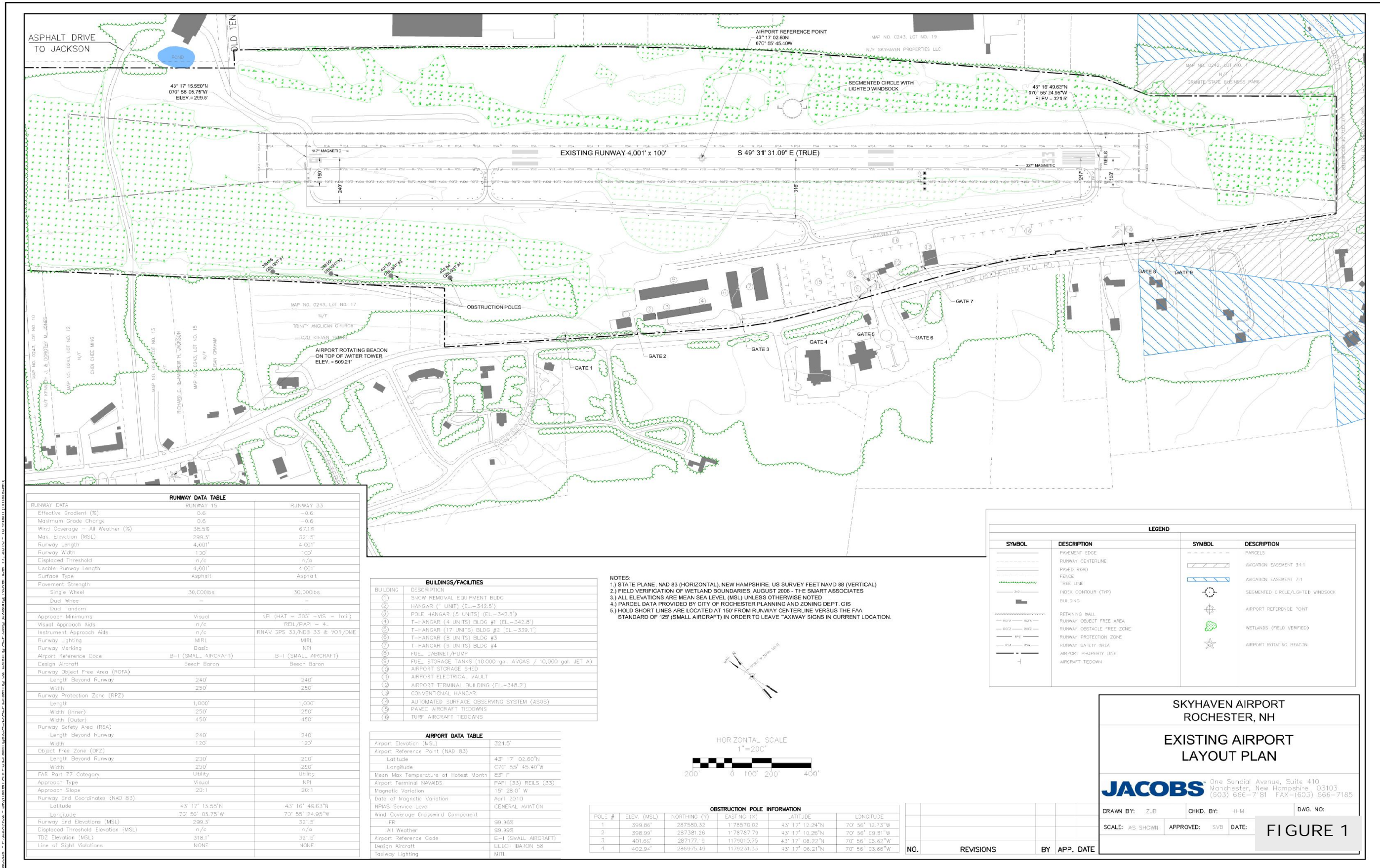
Notes:

FAA 3-letter identifier for Skyhaven Airport is DAW.
 Airport Reference Code (ARC): Approach Category A = <91 knots. Design Group I = wingspan <49'.
 Approach Category B = 91knots <121 knots. Design Group II = wingspan 49' <79'
 Small = 12,500 lbs. maximum gross weight or less
 FAA NPIAS = FAA National Plan of Integrated Airport Systems
 NH SASP = New Hampshire State Airport System Plan
 GPS = Global Positioning System. LPV = Localizer Performance with Vertical Guidance.
 HAT = height above runway touchdown zone elevation
 Annual Service Volume & Hourly Capacity Source: FAA Advisory Circular 150/5060-5, Airport Capacity and Delay, Chapter 2
 FAA published a new GPS LPV instrument approach to Runway 33 in 2010.

Sources:

Skyhaven Airport Master Plan Update, 2000/2001, Hoyle Tanner & Associates; NHDOT; FAA Airport Master Record Form 5010;
 FAA Airport/Facility Directory; FAA Terminal Procedures Publication; FAA Advisory Circular 150/5300-13, Airport Design;
 FAA Advisory Circular 150/5060-5, Airport Capacity & Delay; Airport field/visual inspections by Jacobs.

SKYHAVEN AIRPORT MASTER PLAN UPDATE

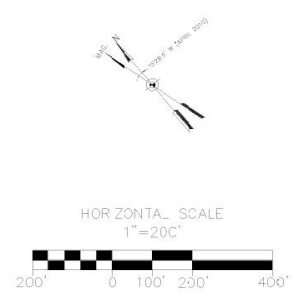


RUNWAY DATA TABLE		
RUNWAY DATA	RUNWAY 15	RUNWAY 33
Effective Gradient (%)	0.6	-0.6
Maximum Grade Change	0.6	-0.6
Wind Coverage - All Weather (%)	38.5%	67.1%
Max. Elevation (MSL)	299.3'	321.5'
Runway Length	4,001'	4,001'
Runway Width	120'	120'
Displaced Threshold	n/c	n/a
Usable Runway Length	4,001'	4,001'
Surface Type	Asphalt	Asphalt
Foamant Strength		
Single Wheel	30,000lbs	30,000lbs
Dual Wheel	-	-
Dual Tandem	-	-
Approach Minimums	Visual	NPI (HAT = 305' - VIS = 1mi.)
Visual Approach Aids	n/c	REIL/PAPI - 4
Instrument Approach Aids	n/c	RNAV 3PS 33/ND3 33 & VO3/DME
Runway Lighting	MIRL	MIRL
Runway Marking	Basic	NPI
Airport Reference Code	B-1 (SMALL AIRCRAFT)	B-1 (SMALL AIRCRAFT)
Design Aircraft	Beech Baron	Beech Baron
Runway Object Free Area (ROFA)		
Length Beyond Runway	240'	240'
Width	250'	250'
Runway Protection Zone (RPZ)		
Length	1,000'	1,000'
Width (Inner)	250'	250'
Width (Outer)	450'	450'
Runway Safety Area (RSA)		
Length Beyond Runway	240'	240'
Width	120'	120'
Object Free Zone (OFZ)		
Length Beyond Runway	200'	200'
Width	250'	250'
FAR Part 77 Category	Utility	Utility
Approach Type	Visual	NPI
Approach Slope	20:1	20:1
Runway End Coordinates (NAD 83)		
Latitude	43° 17' 15.55"N	43° 16' 49.63"N
Longitude	70° 56' 05.75"W	70° 55' 24.95"W
Runway End Elevations (MSL)	299.3'	321.5'
Displaced Threshold Elevation (MSL)	n/c	n/a
TDZ Elevation (MSL)	318.1'	321.5'
Line of Sight Violations	NONE	NONE

BUILDINGS/FACILITIES	
BUILDING	DESCRIPTION
1	SNOW REMOVAL EQUIPMENT BLDG
2	HANGAR ("UNIT") (EL.-342.5')
3	POLE HANGAR (5 UNITS) (EL.-342.3')
4	T-HANGAR (4 UNITS) BLDG #1 (EL.-342.8')
5	T-HANGAR (17 UNITS) BLDG #2 (EL.-339.1')
6	T-HANGAR (5 UNITS) BLDG #3
7	T-HANGAR (5 UNITS) BLDG #4
8	FUEL CABINET/PUMP
9	FUEL STORAGE TANKS (10,000 gal. AVGAS / 10,000 gal. JET A)
10	AIRPORT STORAGE SHED
11	AIRPORT ELECTRICAL PAULT
12	AIRPORT TERMINAL BUILDING (EL.-248.2')
13	CONVENTIONAL HANGAR
14	AUTOMATED SURFACE OBSERVING SYSTEM (ASOS)
15	PAVED AIRCRAFT TIEDOWNS
16	TURF AIRCRAFT TIEDOWNS

AIRPORT DATA TABLE	
Airport Elevation (MSL)	321.5'
Airport Reference Point (NAD 83)	
Latitude	43° 17' 02.60"N
Longitude	70° 55' 45.40"W
Mean Max Temperature of Hottest Month	83° F
Airport Terminal NAVD83	FAP1 (33) REILS (33)
Magnetic Variation	15° 28.0' W
Date of Magnetic Variation	Apr 1 2010
NPIAS Service Level	GENERAL AVIATION
Wind Coverage Crosswind Component	
IFR	99.96%
All Weather	99.99%
Airport Reference Code	E-1 (SMALL AIRCRAFT)
Design Aircraft	BEECH BARON 58
Taxiway Lighting	MIL

- NOTES:
 1) STATE PLANE, NAD 83 (HORIZONTAL), NEW HAMPSHIRE US SURVEY FEET NAVD 88 (VERTICAL)
 2) FIELD VERIFICATION OF WETLAND BOUNDARIES AUGUST 2008 - THE SMART ASSOCIATES
 3) ALL ELEVATIONS ARE MEAN SEA LEVEL (MSL) UNLESS OTHERWISE NOTED
 4) PARCEL DATA PROVIDED BY CITY OF ROCHESTER PLANNING AND ZONING DEPT. GIS
 5) HOLD SHORT LINES ARE LOCATED AT 150' FROM RUNWAY CENTERLINE VERSUS THE FAA STANDARD OF 125' (SMALL AIRCRAFT) IN ORDER TO LEAVE TAXIWAY SIGNS IN CURRENT LOCATION.



OBSTRUCTION POLE INFORMATION					
POLE #	ELEV. (MSL)	NORTHING (Y)	EASTING (X)	AZIMUTH	LONGITUDE
1	399.86'	287580.32	1178570.02	43° 17' 12.24"N	70° 56' 12.73"W
2	398.99'	287381.26	1178787.79	43° 17' 10.26"N	70° 56' 09.81"W
3	401.65'	287177.9	1179010.75	43° 17' 08.22"N	70° 56' 06.82"W
4	402.92'	286975.49	1179231.33	43° 17' 06.21"N	70° 56' 03.86"W

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
---	PAVEMENT EDGE	---	PARCELS
---	RUNWAY CENTERLINE	---	AVIGATION EASEMENT 34-1
---	PAVED ROAD	---	AVIGATION EASEMENT 7-1
---	FENCE	---	SEGMENTED CIRCLE/LOG-TEE WINDSOCK
---	"TREE" LINE	---	AIRPORT REFERENCE POINT
---	INDEX CONTOUR (TYP)	---	AIRPORT REFERENCE POINT
---	BUILDING	---	WETLANDS (FIELD VERIFIED)
---	RETAINING WALL	---	AIRPORT ROTATING BEACON
---	RUNWAY OBJECT FREE AREA		
---	RUNWAY OBSTACLE FREE ZONE		
---	RUNWAY PROTECTION ZONE		
---	RUNWAY SAFETY AREA		
---	AIRPORT PROPERTY LINE		
---	AIRCRAFT TIEDOWN		

**SKYHAVEN AIRPORT
ROCHESTER, NH**

**EXISTING AIRPORT
LAYOUT PLAN**

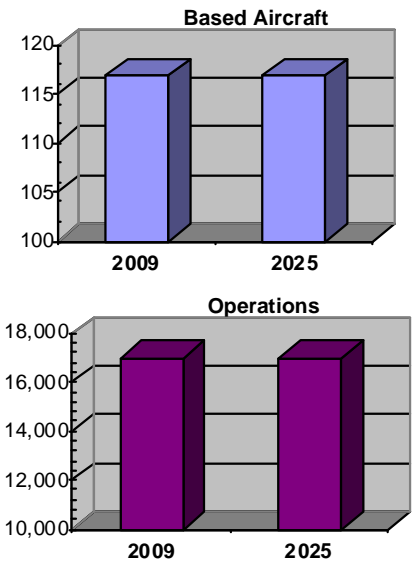
JACOBS One Sundial Avenue, Suite 410
Manchester, New Hampshire 03103
(603) 666-7781 FAX-(603) 666-7185

DRAWN BY: ZJB CHKD. BY: H-H DWG. NO:
SCALE: AS SHOWN APPROVED: SVB DATE: **FIGURE 1**

NO.	REVISIONS	BY	APP. DATE

FORECASTS OF AVIATION ACTIVITY

- Three forecast scenarios were developed based on a variety of factors that could affect future aviation activity at Skyhaven Airport. Two of the forecast scenarios presented a high and low range of potential activity.
- The FAA's Terminal Area Forecast (TAF) represents a balance between the high and low forecast scenarios and is the recommended forecast for this AMPU. FAA's TAF projects that there will be 106 based aircraft and 17,000 aircraft operations annually (an average of 46 aircraft operations per day) through 2025.
- The forecasts concluded that corporate jets and turboprops may generate between 200 and 500 operations annually at Skyhaven Airport by 2028 if certain improvements were made to the airport, including transient aircraft parking, Jet-A fuel, and the availability of FBO services.
- The future role of Skyhaven Airport will remain General Aviation.
- The ultimate critical design aircraft will be the Raytheon (Beech) King Air 200, which falls within ARC B-II.



SKYHAVEN AIRPORT FACILITY REQUIREMENTS

- Additional T-hangars: At the time of this report, PDA has 37 aircraft owners on a waiting list to rent T-hangars. Some of the demand comes from owners of based aircraft presently on tiedowns at the airport.
- Transient aircraft parking apron: The apron should provide sufficient space for 2 to 3 parking positions for aircraft the size of a Beech King Air 200 and/or Cessna Citation CJ-3, as well as 3 to 4 positions for single and multi-engine piston aircraft, such as a Raytheon (Beech) Baron, Piper Navajo, etc. The apron should also provide sufficient space to allow for power-in, power-out maneuvering, particularly for turbine-powered aircraft.
- Runway length: An analysis of runway length requirements for corporate aircraft concluded that the majority of corporate jets in production can takeoff and land on the existing 4,001' Runway 15-33. Some mid-size and large jets would need to takeoff with reduced payload and fuel, but most could carry 4 passengers and fly non-stop for 1,000 miles after taking off from Runway 15-33. There is room on airport property to extend Runway 15 to the north by 500', which would allow turbine aircraft to takeoff with increased payload and fuel. Runway 15-33 is recommended to ultimately be 4,500' x 75' if corporate aircraft demand increases sufficiently by 2028.
- The forecasts of demand note that if certain improvements are made to Skyhaven Airport corporate jets may generate 500 operations annually by 2028, which is needed to justify the 500' extension to Runway 15.

- Some FAR Part 77 imaginary surfaces over and in the vicinity of the airport have penetrations, primarily vegetation, which should be removed, marked, or lighted, as determined by FAA.
- FAA has published a new LPV (localizer performance with vertical guidance) instrument approach to Runway 33. Installation of an Omni Directional Approach Light System (ODALS) to Runway 33 could allow the visibility minimums to be reduced from 1 mile to $\frac{3}{4}$ mile, which would provide operational benefits to aircraft operators and potentially increase the number of aircraft that land at Skyhaven. If the visibility minimums are reduced by FAA, the Runway 33 Runway Protection Zone (RPZ) would increase in size from the current 8 acres to almost 49 acres (Figure 2), which may require property acquisition in order to control the land use within the RPZ in conformance with FAA criteria.
- Acquire property(ies) currently designated as through-the-fence in accordance with current FAA guidance.
- If the existing based aircraft parking apron is converted to transient aircraft parking, a new paved based aircraft tiedown apron will be needed.
- Runway 15-33, the based aircraft tiedown apron, and the auto parking lot pavement are in poor condition and should be rehabilitated or reconstructed by 2015.
- The existing aircraft self-serve fuel pumps should be relocated to a location that will avoid interference with other aircraft taxiing to and from parking.

ALTERNATIVES

Alternatives were developed and analyzed for a number of facilities on the airport:

- Four runway length options
- Installation of the ODALS to Runway 33
- Relocation of the self-serve fuel pumps
- Development and location of the transient parking and new based tiedown aprons

A detailed alternatives evaluation process was prepared and a recommended layout was developed. The layout of future hangars shown on the 2001/2003 Airport Layout Plan (ALP) was carried forward in this plan (Figure 3).

RECOMMENDED AIRPORT LAYOUT

- Rehabilitate Runway 15-33 4,001' x 75' by 2015
- Acquire property in the larger Runway 33 RPZ.
- Construct new paved based aircraft tiedown apron south of the terminal building.
- Construct new aircraft runup pad adjacent to the parallel taxiway in the vicinity of the Runway 33 threshold.
- Rehabilitate the existing based aircraft tiedown apron and convert it to a transient parking apron.
- Construct an aircraft washpad on the apron. Remove existing self-serve fuel pumps and install new pumps in corner of new transient parking apron.
- Reconstruct and stripe auto parking lot.
- Construct new conventional hangar (approximately 60' x 60' in size) adjacent to and south of the terminal building.

- Construct approximately 87 new T-hangar units (actual number and timing based on commitments from aircraft owners).
- Extend Runway 15 by 500 feet to the north (ultimate runway = 4,500' x 75'). Extend the parallel taxiway 500' and construct aircraft runup pad adjacent to new 15 threshold. Displace the Runway 33 threshold by 300 feet to the north. Relocate the existing Runway End Identifier Lights (REILS) and Precision Approach Path Indicator (PAPI) lights adjacent to displaced threshold.
- Install ODALS to Runway 33 after the 33 threshold has been displaced by 300'. Note that if visibility minimums are reduced to $\frac{3}{4}$ mile, the Runway 33 protection zone increases in size (Figure 2).
- Complete installation of airport fence around the entire airport perimeter to prevent wildlife encroachment on the runway environment.

The Ultimate Terminal Area Plan is shown in Figure 3, and the Ultimate Airport Layout Plan (ALP) is shown in Figure 4. Table 2 presents the cost estimate for each project, potential funding sources, as well as the sequence and time frame. The CIP is subject to change based on funding availability, agency approvals, and obtaining permits.

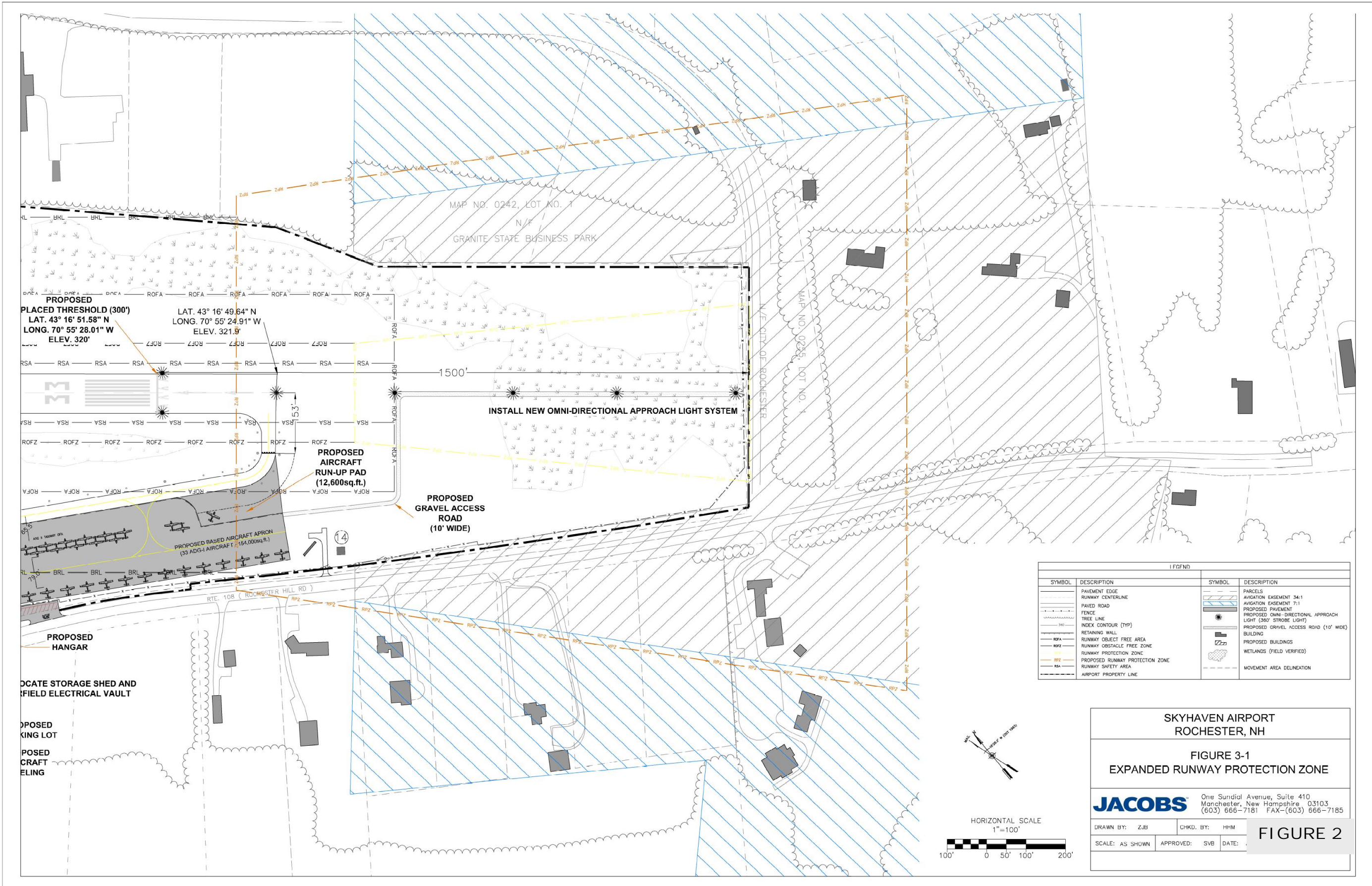
ENVIRONMENTAL CONDITIONS

- The primary environmental issue on Skyhaven Airport is wetlands. A mitigation agreement was signed between NHDOT and NHDES in 2004 that identified wetlands impacts from improvement projects shown on the 2001/2003 ALP. Under the agreement, a total of 11.84 acres of wetlands were allowed to be disturbed, and the taxiway project impacted approximately 4.59 acres of wetlands, which leaves approximately 7.25 acres of wetlands. Calculations of potential wetlands impacts from the projects shown on this ALP would result in approximately 6 acres of impacts. As a result, all of the projects shown on the ALP can be accomplished within the limits of the existing mitigation agreement. The agreement has no expiration date. An environmental assessment will need to be prepared and permits will be required for certain projects prior to construction.
- The 2001 Airport Master Plan developed FAA approved noise contours (based on the Day-Night Noise metric, or LDN), for various activity forecast scenarios. The 65 LDN noise contour that was developed based on the forecast scenario closest to the projections presented in this master plan was overlaid on a land use map. The 65 LDN noise contour does not extend off airport property, and it does not impact any noise-sensitive land uses adjacent to the airport.
- The strobe lights on the ODALS would be noticed by adjacent residents and car drivers on Route 108, particularly at night and in poor weather (low cloud and/or mist) conditions. One option to mitigate the lights is to put shields adjacent to the lights on each pole, ensuring that the lights are clearly visible to pilots approaching to land on Runway 33. In addition, existing ambient lighting will help mitigate the impact of the approach lights. Acquiring property will also help mitigate the affect of ODALS on neighbors to the south of the airport by giving the airport better control over installation and maintenance of the lights, better control over use of the lights, and better control of land use.

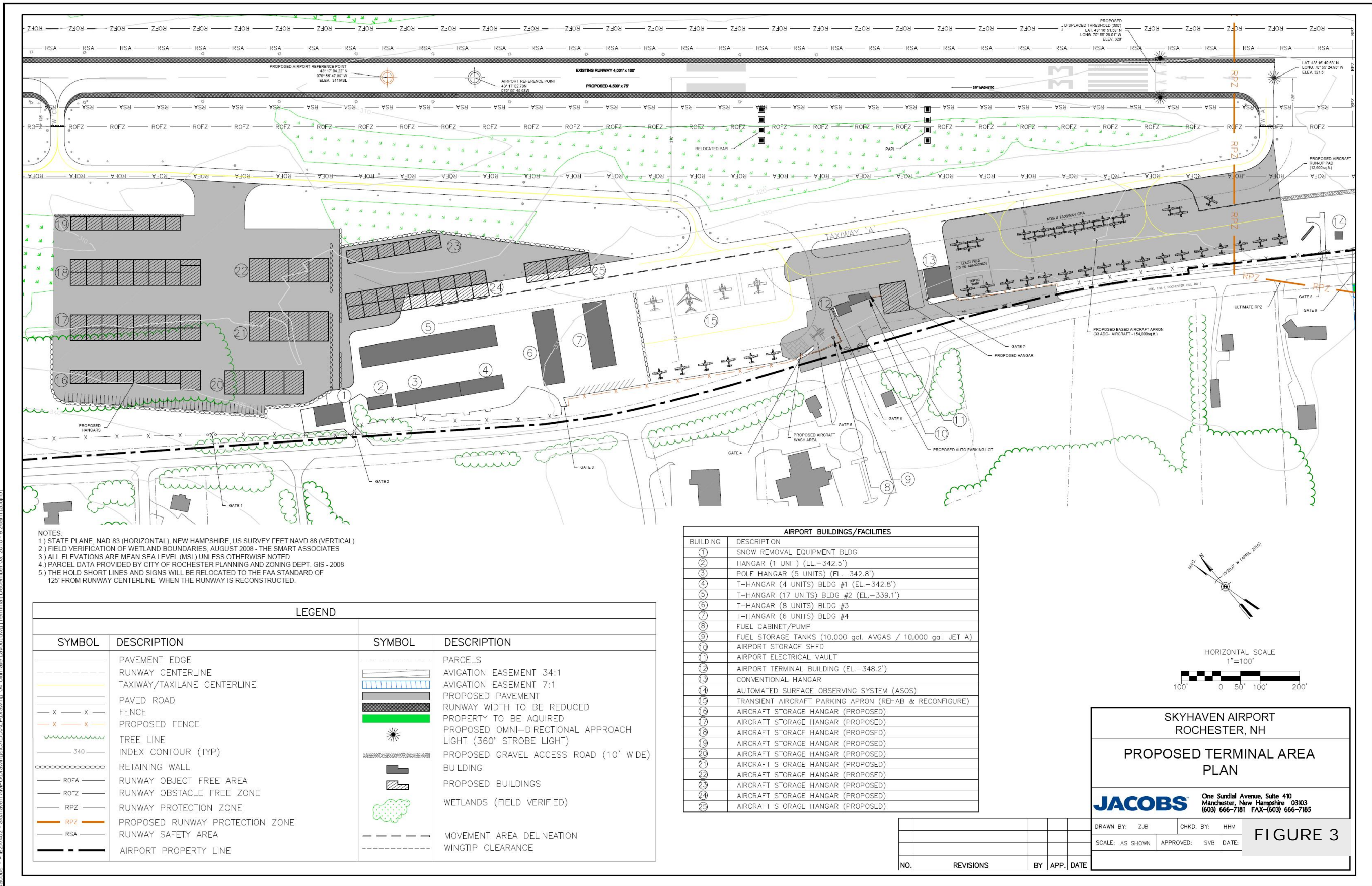
PROJECT COORDINATION

A number of meetings were held with the Skyhaven Airport Advisory Committee (SAAC) throughout the preparation of the Master Plan. In addition, meetings were held with the City of Rochester, Ossipee Valley Aviation (the former FBO), airport users, and NHDOT.

SKYHAVEN AIRPORT MASTER PLAN UPDATE



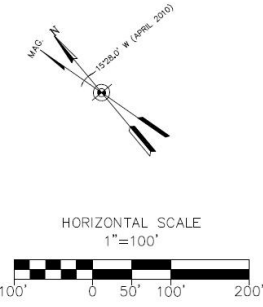
SKYHAVEN AIRPORT MASTER PLAN UPDATE



- NOTES:**
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 - 2) FIELD VERIFICATION OF WETLAND BOUNDARIES, AUGUST 2008 - THE SMART ASSOCIATES
 - 3) ALL ELEVATIONS ARE MEAN SEA LEVEL (MSL) UNLESS OTHERWISE NOTED
 - 4) PARCEL DATA PROVIDED BY CITY OF ROCHESTER PLANNING AND ZONING DEPT. GIS - 2008
 - 5) THE HOLD SHORT LINES AND SIGNS WILL BE RELOCATED TO THE FAA STANDARD OF 125' FROM RUNWAY CENTERLINE WHEN THE RUNWAY IS RECONSTRUCTED.

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PAVEMENT EDGE		PARCELS
	RUNWAY CENTERLINE		AVIGATION EASEMENT 34:1
	TAXIWAY/TAXILANE CENTERLINE		AVIGATION EASEMENT 7:1
	PAVED ROAD		PROPOSED PAVEMENT
	FENCE		RUNWAY WIDTH TO BE REDUCED
	PROPOSED FENCE		PROPOSED OMNI-DIRECTIONAL APPROACH LIGHT (360° STROBE LIGHT)
	TREE LINE		PROPOSED GRAVEL ACCESS ROAD (10' WIDE)
	INDEX CONTOUR (TYP)		BUILDING
	RETAINING WALL		PROPOSED BUILDINGS
	ROFA - RUNWAY OBJECT FREE AREA		WETLANDS (FIELD VERIFIED)
	ROFZ - RUNWAY OBSTACLE FREE ZONE		MOVEMENT AREA DELINEATION
	RPZ - RUNWAY PROTECTION ZONE		WINGTIP CLEARANCE
	PROPOSED RUNWAY PROTECTION ZONE		
	RSA - RUNWAY SAFETY AREA		
	AIRPORT PROPERTY LINE		

AIRPORT BUILDINGS/FACILITIES	
BUILDING	DESCRIPTION
1	SNOW REMOVAL EQUIPMENT BLDG
2	HANGAR (1 UNIT) (EL.-342.5')
3	POLE HANGAR (5 UNITS) (EL.-342.8')
4	T-HANGAR (4 UNITS) BLDG #1 (EL.-342.8')
5	T-HANGAR (17 UNITS) BLDG #2 (EL.-339.1')
6	T-HANGAR (8 UNITS) BLDG #3
7	T-HANGAR (6 UNITS) BLDG #4
8	FUEL CABINET/PUMP
9	FUEL STORAGE TANKS (10,000 gal. AVGAS / 10,000 gal. JET A)
10	AIRPORT STORAGE SHED
11	AIRPORT ELECTRICAL VAULT
12	AIRPORT TERMINAL BUILDING (EL.-348.2')
13	CONVENTIONAL HANGAR
14	AUTOMATED SURFACE OBSERVING SYSTEM (ASOS)
15	TRANSIENT AIRCRAFT PARKING APRON (REHAB & RECONFIGURE)
16	AIRCRAFT STORAGE HANGAR (PROPOSED)
17	AIRCRAFT STORAGE HANGAR (PROPOSED)
18	AIRCRAFT STORAGE HANGAR (PROPOSED)
19	AIRCRAFT STORAGE HANGAR (PROPOSED)
20	AIRCRAFT STORAGE HANGAR (PROPOSED)
21	AIRCRAFT STORAGE HANGAR (PROPOSED)
22	AIRCRAFT STORAGE HANGAR (PROPOSED)
23	AIRCRAFT STORAGE HANGAR (PROPOSED)
24	AIRCRAFT STORAGE HANGAR (PROPOSED)
25	AIRCRAFT STORAGE HANGAR (PROPOSED)



**SKYHAVEN AIRPORT
ROCHESTER, NH**

**PROPOSED TERMINAL AREA
PLAN**

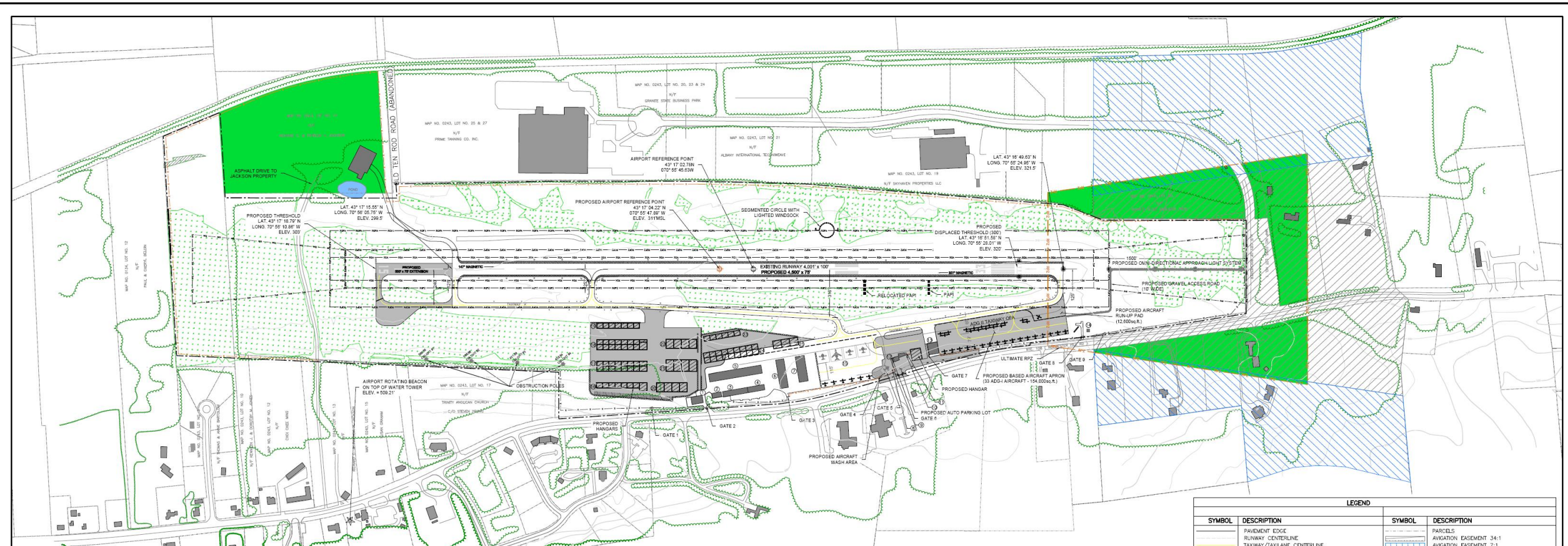
JACOBS One Sundial Avenue, Suite 410
Manchester, New Hampshire 03103
(603) 666-7181 FAX-(603) 666-7185

DRAWN BY: ZJB CHKD. BY: HHM
SCALE: AS SHOWN APPROVED: SVB DATE: _____

FIGURE 3

NO.	REVISIONS	BY	APP.	DATE

SKYHAVEN AIRPORT MASTER PLAN UPDATE



RUNWAY DATA	RUNWAY 15		RUNWAY 33	
	EXISTING	PROPOSED	EXISTING	PROPOSED
Effective Gradient (%)	0.6	0.4	-0.6	-0.4
Maximum Grade Change	0.0	0.0	0.0	0.0
Wind Coverage - All Weather (%)	38.5%	38.5%	67.1%	67.1%
Max. Elevation (MSL)	299.5'	303'	321.5'	321.5'
Runway Length	4,001'	4,500'	4,001'	4,500'
Runway Width	100'	75'	100'	75'
Displaced Threshold	n/a	n/a	n/a	300'
Usable Runway Length	4,001'	4,500'	4,001'	4,500'
Surface Type	Asphalt	Asphalt	Asphalt	Asphalt
Pavement Strength				
Single Wheel	30,000lbs	30,000lbs	30,000lbs	30,000lbs
Dual Wheel	-	-	-	-
Dual Tandem	-	-	-	-
Approach Minimums	Visual	Visual	NPI (HAT=305'-VIS.=1mi.)	NPI (HAT=300'-VIS.=1mi.)
Visual Approach Aids	n/a	n/a	REL/PAPI - 4L	REL/PAPI - 4L
Instrument Approach Aids	n/a	n/a	RNAV GPS 33/ND8 33 & VOR/DME	RNAV GPS 33/ND8 33 & VOR/DME
Runway Lighting	MIRL	MIRL	MIRL	MIRL
Runway Marking	Basic	Basic	NPI	NPI
Airport Reference Code	B-I (SMALL AIRCRAFT)	B-II (SMALL AIRCRAFT)	B-I (SMALL AIRCRAFT)	B-II (SMALL AIRCRAFT)
Design Aircraft	BEECH BARON 58	BEECH KING AIR 200	BEECH BARON 58	BEECH KING AIR 200
Runway Object Free Area (ROFA)				
Length Beyond Runway	240'	300'	240'	300'
Width	250'	500'	250'	500'
Runway Protection Zone (RPZ)				
Length	1,000'	1,000'	1,000'	1,700'
Width (Inner)	250'	250'	250'	1,000'
Width (Outer)	450'	450'	450'	1,510'
Runway Safety Area (RSA)				
Length Beyond Runway	240'	300'	240'	300'
Width	120'	150'	120'	150'
Object Free Zone (OFZ)				
Length Beyond Runway	200'	200'	200'	200'
Width	250'	250'	250'	250'
FAR Part 77 Category	Utility	Utility	Utility	Utility
Approach Type	Visual	Visual	NPI	NPI
Approach Slope	20:1	20:1	20:1	20:1
Runway End Coordinates (NAD 83)				
Latitude	43° 17' 15.55" N	43° 17' 18.79" N	43° 16' 49.63" N	43° 16' 49.63" N
Longitude	70° 56' 05.75" W	70° 56' 10.86" W	70° 55' 24.95" W	70° 55' 24.95" W
Runway End Elevations (MSL)	299.5'	303'	321.5'	321.5'
Threshold Coordinates (NAD 83)				
Latitude	43° 17' 15.55" N	43° 17' 18.79" N	43° 16' 49.63" N	43° 16' 51.58" N
Longitude	70° 56' 05.75" W	70° 56' 10.86" W	70° 55' 24.95" W	70° 55' 28.01" W
Threshold Elevation (MSL)	299.5'	303'	321.5'	320'
TDZ Elevation (MSL)	318.1'	318.1'	321.5'	321.5'
Line of Sight Violations	NONE	NONE	NONE	NONE

BUILDING	DESCRIPTION
1	SNOW REMOVAL EQUIPMENT BLDG
2	HANGAR (1 UNIT) (EL.-342.5')
3	POLE HANGAR (5 UNITS) (EL.-342.8')
4	T-HANGAR (4 UNITS) BLDG #1 (EL.-342.8')
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6	T-HANGAR (8 UNITS) BLDG #3
7	T-HANGAR (6 UNITS) BLDG #4
8	FUEL CABINET/PUMP
9	FUEL STORAGE TANKS (10,000 gal. AVGAS / 10,000 gal. JET A)
10	AIRCRAFT STORAGE SHED
11	AIRCRAFT ELECTRICAL VAULT
12	AIRCRAFT TERMINAL BUILDING (EL.-348.2')
13	CONVENTIONAL HANGAR
14	AUTOMATED SURFACE OBSERVING SYSTEM (ASOS)
15	TRANSIENT AIRCRAFT PARKING APRON (REHAB & RECONFIGURE)
16	AIRCRAFT STORAGE HANGAR (PROPOSED)
17	AIRCRAFT STORAGE HANGAR (PROPOSED)
18	AIRCRAFT STORAGE HANGAR (PROPOSED)
19	AIRCRAFT STORAGE HANGAR (PROPOSED)
20	AIRCRAFT STORAGE HANGAR (PROPOSED)
21	AIRCRAFT STORAGE HANGAR (PROPOSED)
22	AIRCRAFT STORAGE HANGAR (PROPOSED)
23	AIRCRAFT STORAGE HANGAR (PROPOSED)
24	AIRCRAFT STORAGE HANGAR (PROPOSED)
25	AIRCRAFT STORAGE HANGAR (PROPOSED)

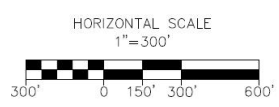
AIRPORT DATA TABLE		
	EXISTING	PROPOSED
Airport Elevation (MSL)	321.5'	321.5'
Airport Reference Point (NAD 83)		
Latitude	43° 17' 02.60"	43° 17' 04.22"
Longitude	70° 55' 45.40"	70° 55' 47.89"
Mean Max Temperature of Hottest Month	83° F	83° F
Airport Terminal NAVAIDS	PAPI	PAPI, ODALS
Magnetic Variation	15° 28.0' W	15° 28.0' W
Date of Magnetic Variation	April 2010	April 2010
NRAS Service Level	General Aviation	General Aviation
Wind Coverage Crosswind Component		
IFR	99.96%	99.96%
All Weather	99.99%	99.99%
Airport Reference Code	B-I (SMALL AIRCRAFT)	B-II (SMALL AIRCRAFT)
Design Aircraft	Beech Baron 58	Beech King Air 200
Runway Lighting	MIRL	MIRL



OBSTRUCTION POLE INFORMATION					
POLE #	ELEV. (MSL)	NORTHING (Y)	EASTING (X)	LATITUDE	LONGITUDE
1	399.86'	287580.32	1178570.02	43° 17' 12.24"	70° 56' 12.73"
2	398.99'	287381.26	1178787.79	43° 17' 10.26"	70° 56' 09.81"
3	401.69'	287177.19	1179010.75	43° 17' 08.22"	70° 56' 06.82"
4	402.94'	286975.49	1179231.33	43° 17' 06.21"	70° 56' 03.86"

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
[Symbol]	PAVEMENT EDGE	[Symbol]	PARCELS
[Symbol]	RUNWAY CENTERLINE	[Symbol]	AVIGATION EASEMENT 34:1
[Symbol]	TAXIWAY/TAXILANE CENTERLINE	[Symbol]	AVIGATION EASEMENT 7:1
[Symbol]	PAVED ROAD	[Symbol]	PROPOSED PAVEMENT
[Symbol]	FENCE	[Symbol]	RUNWAY WIDTH TO BE REDUCED
[Symbol]	PROPOSED FENCE	[Symbol]	PROPERTY TO BE ACQUIRED
[Symbol]	TREE LINE	[Symbol]	PROPOSED ONE-DIRECTIONAL APPROACH LIGHT (360° STROBE LIGHT)
[Symbol]	INDEX CONTOUR (TYP)	[Symbol]	PROPOSED GRAVEL ACCESS ROAD (10' WIDE)
[Symbol]	RETAINING WALL	[Symbol]	BUILDING
[Symbol]	RUNWAY OBJECT FREE AREA	[Symbol]	PROPOSED BUILDINGS
[Symbol]	RUNWAY OBSTACLE FREE ZONE	[Symbol]	WETLANDS (FIELD VERIFIED)
[Symbol]	RUNWAY PROTECTION ZONE	[Symbol]	MOVEMENT AREA DELINEATION
[Symbol]	PROPOSED RUNWAY PROTECTION ZONE	[Symbol]	WINGTIP CLEARANCE
[Symbol]	RUNWAY SAFETY AREA		
[Symbol]	AIRPORT PROPERTY LINE		

NOTES:
 1) STATE PLANE, NAD 83 (HORIZONTAL), NEW HAMPSHIRE, US SURVEY FEET VAD 88 (VERTICAL)
 2) FIELD VERIFICATION OF WETLAND BOUNDARIES, AUGUST 2009 - THE SMART ASSOCIATES
 3) ALL ELEVATIONS ARE MEAN SEA LEVEL (MSL) UNLESS OTHERWISE NOTED
 4) PARCEL DATA PROVIDED BY CITY OF ROCHESTER PLANNING AND ZONING DEPT. GIS
 5) THE HOLD SHORT LINES AND SIGNS WILL BE RELOCATED TO THE FAA STANDARD OF 125' FROM RUNWAY CENTERLINE WHEN THE RUNWAY IS RECONSTRUCTED.



NEW HAMPSHIRE BUREAU OF AERONAUTICS

APPROVED: _____
 NHDOT (DIRECTOR OF AERONAUTICS, RAIL & TRANSIT)
 DATE: _____

CONCURRED: _____
 POA (EXECUTIVE DIRECTOR)
 DATE: _____

NO.	REVISIONS	BY	APP. DATE

SKYHAVEN AIRPORT
 ROCHESTER, NH

PROPOSED AIRPORT
 LAYOUT PLAN

JACOBS One Sundial Avenue, Suite 410
 Manchester, New Hampshire 03103
 (603) 666-7181 FAX-(603) 666-7185

DRAWN BY: ZJB CHKD. BY: HJ
 SCALE: AS SHOWN APPROVED: SVB DA

FIGURE 4

Table 2
 Skyhaven Airport Master Plan Update - Capital Improvement Plan
 Federal Fiscal Years (FFY) 2010-2028

FFY	Project Description	Total	FAA	NHDOT	PDA	Private
2010	Property Acquisition in Runway 33 Approach Surface	\$631,600	\$600,000	\$15,800	\$15,800	\$0
2011	Purchase SRE Equipment	\$254,100	\$241,395	\$12,705	\$12,705	\$0
2012	Design only: rehabilitation of Runway 15-33 (4,001' x 75')	\$380,000	\$361,000	\$19,000	\$19,000	\$0
2013	Construct only: rehabilitation of Runway 15-33 (4,001' x 75') & displace Rwy 33 threshold by 300'	\$1,800,000	\$1,710,000	\$90,000	\$90,000	\$0
2013	Off-airport obstruction removal	\$100,000	\$95,000	\$5,000	\$5,000	\$0
2013	Prepare EA for ODALS and New Based AC Tiedown Apron	\$20,000	\$19,000	\$1,000	\$1,000	\$0
2014	Install ODALS to Runway 33	\$80,000	\$76,000	\$4,000	\$4,000	\$0
2014	Design only: new based aircraft tiedown apron	\$237,000	\$225,150	\$11,850	\$11,850	\$0
	Sub-Total Five Year Period	\$3,502,700	\$3,327,545	\$159,355	\$159,355	\$0
2015	Acquire property in Runway 33 RPZ as it becomes available	\$350,000	\$332,500	\$17,500	\$17,500	\$0
2015	Construct only: new based aircraft tiedown apron + remove septic system	\$950,000	\$902,500	\$47,500	\$47,500	\$0
2016	Design only: rehab terminal area tiedown apron & move self-serve fuel pumps	\$308,750	\$293,313	\$15,438	\$15,438	\$0
2016	Acquire property in Runway 33 RPZ as it becomes available	\$350,000	\$332,500	\$17,500	\$17,500	\$0
2017	Construct only: rehab terminal area tiedown apron & move self-serve fuel pumps	\$1,235,000	\$1,173,250	\$61,750	\$61,750	\$0
2018	Environmental Assessment: North apron & runway extension	\$237,500	\$225,625	\$11,875	\$11,875	\$0
2019	Construct row of 10 T-hangar units	\$600,000	\$0	\$0	\$0	\$600,000
2019	Acquire property in Runway 33 RPZ as it becomes available	\$350,000	\$332,500	\$17,500	\$17,500	\$0
2019	Design only: new paved north apron w/tiedowns	\$285,000	\$270,750	\$14,250	\$14,250	\$0
	Sub-Total Five Year Period	\$4,666,250	\$3,862,938	\$203,313	\$203,313	\$600,000
2020	Construct only: grading & site work for new north apron	\$2,850,000	\$2,707,500	\$142,500	\$142,500	\$0
2021	Construct only: new paved north apron w/tiedowns	\$1,140,000	\$1,083,000	\$57,000	\$57,000	\$0
2022	Construct row of 10 T-hangar units	\$600,000	\$0	\$0	\$0	\$600,000
2023	Off-airport obstruction removal	\$100,000	\$95,000	\$5,000	\$5,000	\$0
2024	None	\$0	\$0	\$0	\$0	\$0
	Sub-Total Five Year Period	\$4,690,000	\$3,885,500	\$204,500	\$204,500	\$600,000
2024	Design only: 500' extension to Runway 15, Taxiway A, and safety area	\$380,000	\$361,000	\$19,000	\$19,000	\$0
2025	Construct only: 500' extension to Runway 15, Taxiway A, and safety area	\$1,472,500	\$1,398,875	\$73,625	\$73,625	\$0
2026	Acquire property in Runway 33 RPZ as it becomes available	\$350,000	\$332,500	\$17,500	\$17,500	\$0
2027	Design & construct airport perimeter fencing	\$300,000	\$285,000	\$15,000	\$15,000	\$0
2028	Construct row of 10 T-hangar units	\$600,000	\$0	\$0	\$0	\$600,000
	Sub-Total Five Year Period	\$3,102,500	\$2,377,375	\$125,125	\$125,125	\$600,000
	GRAND TOTAL	\$15,961,450	\$13,453,358	\$692,293	\$692,293	\$1,800,000

Notes:

1. FFY = Federal Fiscal Year
2. Cost estimates shown in 2009 \$.
3. Assume FAA share for eligible projects remains at 95%. May change as a result of future legislation.
4. The time frame for specific project implementation is subject to a number of variables including funding availability, as well as environmental reviews and permitting. As a result, the actual year in which a project is undertaken may vary from what is shown above