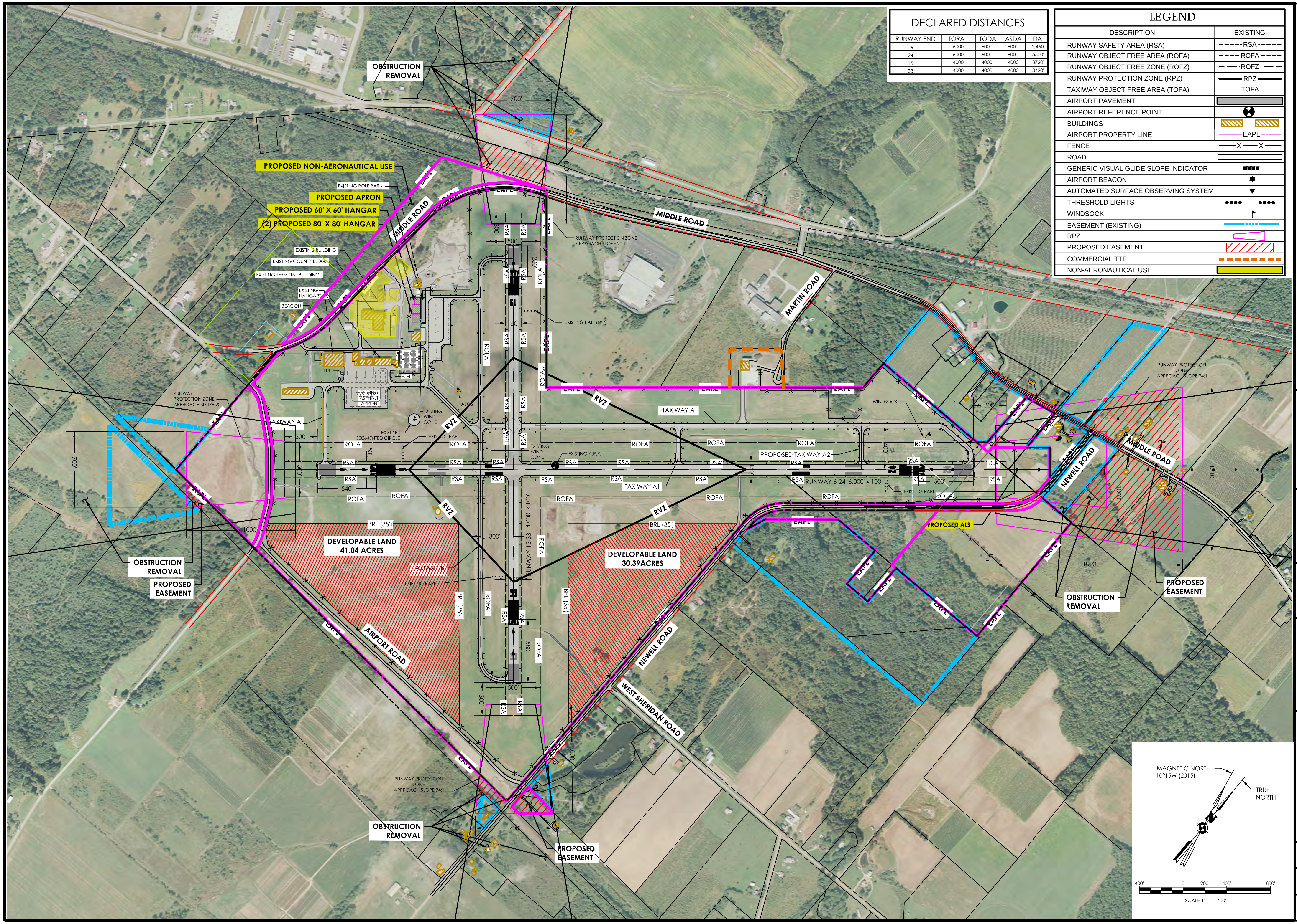

DECLARED DISTANCES

RUNWAY END	TORA	TODA	ASDA	LDA
6	6000'	6000'	6000'	5,460'
24	6000'	6000'	6000'	5500'
15	4000'	4000'	4000'	3720'
33	4000'	4000'	4000'	3420'

LEGEND

DESCRIPTION	EXISTING
RUNWAY SAFETY AREA (RSA)	RSA
RUNWAY OBJECT FREE AREA (ROFA)	ROFA
RUNWAY OBJECT FREE ZONE (ROFZ)	ROFZ
RUNWAY PROTECTION ZONE (RPZ)	RPZ
TAXIWAY OBJECT FREE AREA (TOFA)	TOFA
AIRPORT PAVEMENT	
AIRPORT REFERENCE POINT	
BUILDINGS	
AIRPORT PROPERTY LINE	EAPL
FENCE	X X
ROAD	
GENERIC VISUAL GLIDE SLOPE INDICATOR	
AIRPORT BEACON	
AUTOMATED SURFACE OBSERVING SYSTEM	
THRESHOLD LIGHTS	
WINDSOCK	
EASEMENT (EXISTING)	
RPZ	
PROPOSED EASEMENT	
COMMERCIAL TTF	
NON-AERONAUTICAL USE	

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Principal-in-Charge: Wayne F.Wegman, P.E.
Project Manager: Lisa Cheung
Designed by: Wayne B. Zian

Revisions

No.	Date	By	Description

Airfield Alternate 5
Displaced Threshold and Economic Devlopment
RDC-B-II
Master Plan Update

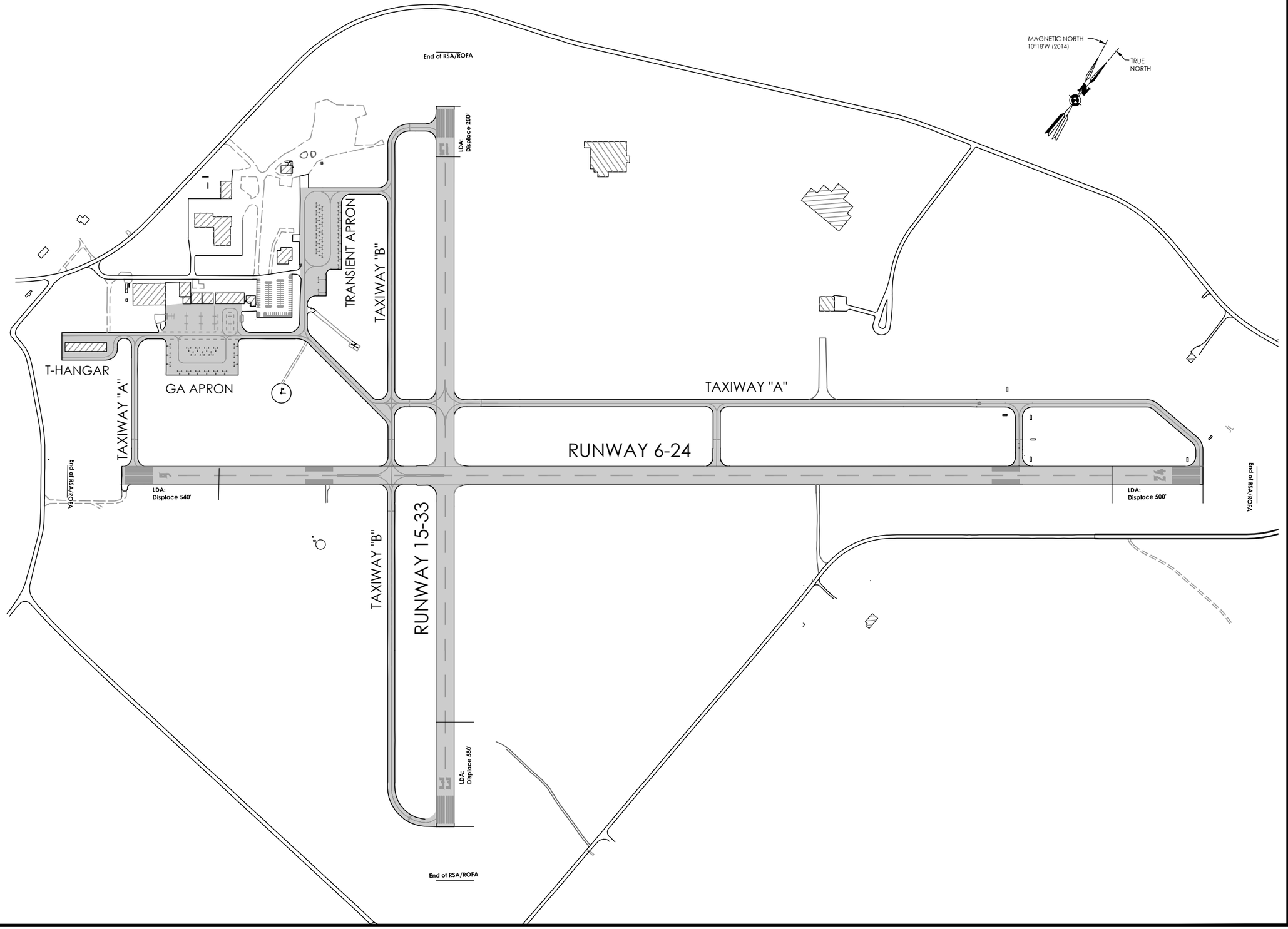
Chautauqua County Dunkirk Airport

Town/City: Sheridan
County: Chautauqua
State: New York

Project No. 95019.46

Drawing No. Figure 5-5

Date December 2015



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Principal-in-Charge: Wayne F.Wegman, P.E.
Project Manager: Shawn R. Bray, P.E.
Designed by: ACL, MAS

Revisions

No.	Date	By	Description
1			

Alternate 5 Declared Distances

Pavement Management Study

Chautauqua County Airport/Dunkirk

Town/City: Sheridan

County: Chautauqua State: New York

Project No.
95000019.0048

Drawing No.
Fig 5-6

Date
September, 2014

Alternative to upgrade to RDC C-II Design standards

Airport management requested a brief synopsis of the impacts to the airport if the airport were to be upgraded to the next design level. It is **not** the desire of the airport management to pursue this alternative, hence it will not be included in the alternative analysis matrix, but is presented here so airport management can understand what steps and implications would occur should the airport need to upgrade to the next RDC of C-II, when and if operating levels of a C-II critical aircraft are realized.

This alternative only outlines the impacts that would result from upgrading Runway 6-24 to the next design level of RDG C-II and maintaining Runway 15-33 with design level of RDG B-II. It is assumed that the obstructions off Runway 6 and 24 could be removed so any displacement of the threshold is purely to meet the ROFA/RSA design lengths under the larger design standards. *It is noted if the obstructions could not be removed then the lengths depicted below would decrease further for the landing distance available.* It is also assumed that Runway 15-33 20:1 obstructions could not be removed resulting in displaced thresholds on Runway 15-33.

Some steps that would be required to upgrade Runway 6-24 to the next RDG C-II consist of:

- Re-grade the RSA to meet standards on southeast side of Runway 6-24
- Purchase ROFA lands on both sides of Runway 6-24, or seek Modifications to Standards to the ROFA for Newell Road location, associated drainage impacts to the creek, and agricultural lands to the north
- Relocate fence
- Displace runway thresholds to provide the 600' before threshold
- Apply declared distances for the 1,000' safety area
- Upgrade all runway lights and Navigational/Visual Aids to coincide with new threshold locations
- Upgrade taxiway hold marking for Taxiway A
- The runway to taxiway centerline are adequate to accommodate the increased wingspan
- Ensure the runway obstacle free zone is clear (200' off runway end, 400' wide)
- Acquire additional easements for the increased RPZ sizes

The existing RSA length from the runway 24 end to the intersection with the airport fence before Newell Road is 538'. The threshold for Runway 24 would need to be displaced 62' to provide the required 600' before threshold, and then declared distances would compensate for the additional 400' to reach the 1,000' length for operations from Runway 6. The existing RSA length from the runway 6 end till it intersects with the airport fence near Cook Rd is 385'. The threshold for Runway 6 would need to be displaced 215' to provide the required 600' before threshold, and declared distances would compensate for the additional 400' to reach the 1,000' length for operations from Runway 24. Runway 15 threshold would be displaced 280 feet and Runway 33 threshold would be displaced 580 feet for obstructions. Standard safety and object free areas lengths exist for RDC B-II for Runway 15 and 33 beyond end of pavement. **Table 5-3** provides a table of declared distances applicable with upgrading Runway 6-24 to RDC C-II, and maintaining Runway 15-33 at RDC B-II.

Table 5-3. Declared Distances for RDC C-II

Runway	TORA	TODA	ASDA	LDA
Runway 6	5,538'	5,538'	5,538'	5,323'
Runway 24	5,385'	5,385'	5,385'	5,323'
Runway 15	4,000'	4,000'	4,000'	3,720'
Runway 33	4,000'	4,000'	4,000'	3,420'

5.1.1.4. Alternative Development Analysis

Table 5-2 is a matrix of how each alternative compares against the criteria. This information was presented to the TAC membership for their input and review.

Table 5-2. Airfield Alternative Matrix

CRITERIA	ALTERNATIVE				
	ALTERNATIVE 1: No Build	ALTERNATIVE 2: Obstruction Removal	ALTERNATIVE 3: Obstruction Removal & Economic Development	ALTERNATIVE 2: Obstruction Removal, Economic Development & ALS	ALTERNATIVE 5: Displaced Threshold
Airport Design Standards	**Rwy**: meets length and width requirements **Twy**: exceeds width requirements **RSA**: meets design standards **ROFA**: MOS for grading issue on southeast side Rwy 6-24 **RPZ**: Doesn't provide complete control, some lands in Railroad ROW, which can't be owned. Work with Railroad on projects	**Rwy**: meets length and width requirements **Twy**: exceeds width requirements **RSA**: meets design standards **ROFA**: MOS for grading issue on southeast side of Rwy 6-24 **RPZ**: Acquire easements for private lands to provide control; some lands in Railroad ROW which can't be owned. Work with Railroad on projects	**Rwy**: meets length and width requirements **Twy**: exceeds width requirements **RSA**: meets design standards **ROFA**: MOS for grading issue on southeast side of Rwy 6-24 **RPZ**: Acquire easements for private lands to provide control; some lands in Railroad ROW which can't be owned. Work with Railroad on projects	**Rwy**: meets length and width requirements **Twy**: exceeds width requirements **RSA**: meets design standards **ROFA**: MOS for grading issue on southeast side of Rwy 6-24 **RPZ**: Acquire easements for private lands to provide control; some lands in Railroad ROW which can't be owned. Work with Railroad on projects	**Rwy**: meets width requirements; limits runway length usability **Twy**: exceeds width requirements **RSA**: meets design standards **ROFA**: MOS for grading issue on southeast side of Rwy 6-24 **RPZ**: Acquire easements for private lands to provide control; some lands in Railroad ROW which can't be owned. Work with Railroad on projects
Facility Requirements	Doesn't provide additional facility needs	Doesn't provide additional facility needs Doesn't provide ALS	Provides additional facility needs without impacting runway length usability Doesn't provide ALS	Provides additional facility needs Provides ALS	Provides additional facility needs,
Environmental	None	Minimal impact tree removal	Minimal impact from tree removal and proposed facility development	Minimal impact from tree removal and proposed facility development	Minimal impact from proposed facility development
Cost	None	Low	Medium	Medium/High	High
Obstruction Analysis	• Doesn't eliminate obstructions • Continue to restrict night instrument operations	• Eliminates obstructions to PAPI OCS, TSS & GQS • Lift runway restrictions	• Eliminates obstructions to PAPI OCS, TSS & GQS • Lift runway restrictions	• Eliminates obstructions to PAPI OCS, TSS & GQS • Lift runway restrictions	• Doesn't eliminate obstructions • May restrict night instrument operations

Land Acquisition	None, RPZ deficiencies continue for Runway 33, 6 and 24	RPZ: additional lands needed for increased RWY 24 RPZ and private lands not controlled for Runway 33, 6 and 24 PAPI OCS/TSS: lands controlled through easement for obstructions	RPZ: additional lands needed for increased RWY 24 RPZ and private lands not controlled for Runway 33, 6 and 24 PAPI OCS/TSS: lands controlled through easement for obstructions	RPZ: additional lands needed for increased RWY 24 RPZ and private lands not controlled for Runway 33, 6 and 24 PAPI OCS/TSS: lands controlled through easement for obstructions	RPZ: additional lands needed for increased RWY 24 RPZ and private lands not controlled for Runway 33, 6 and 24 PAPI OCS/TSS: lands not controlled for obstructions
Feasibility	Easily implementable. Maintains existing infrastructure. Doesn't provide additional revenue producing infrastructure, nor does it provide the desired approach lighting system to Runway 24. Obstructions not removed so usability of the runway will continue to be limited, and ultimately runway length could be jeopardized, as well as airport usability could be limited to visual operations.	Requires land owner negotiations, or worse case eminent domain to eliminate obstructions. In the long-term would revert the airport to full usability during the daytime and nighttime. Doesn't provide the airfield with ALS to help in airfield identification during low instrument conditions. Doesn't provide additional revenue producing infrastructure.	Requires land owner negotiations, or worse case eminent domain to eliminate obstructions. In the long-term would revert the airport to full usability during the daytime and nighttime. Doesn't provide the airfield with ALS to help in airfield identification during low instrument conditions. Provides for additional revenue producing infrastructure	Requires land owner negotiations, or worse case eminent domain to eliminate obstructions. In the long-term would revert the airport to full usability during the daytime and nighttime. Provides the needed ALS to improve visibility of Runway 24 during low instrument conditions. Provides for additional revenue producing infrastructure	The implementation of displacing the threshold and relocation of associated lighting would be costly, and likely continue to degrade the usability of the airport, as runway length is shortened, obstructions would continue to grow that could adversely affect the night instrument approaches in the future. The installation of the approach lighting system would unlikely provide a benefit as the obstructions would impact the approach minima. Provides for additional revenue producing infrastructure.
TAC Input	Limits the usability of the instrument approaches and the PAPI. Impacts the usability of the airport and deters aircraft owners to base/use the airport.	Removing the obstructions will lift restrictions on instrument approaches and PAPI, but restriction would remain on the usability of the airport during low instrument weather conditions below 1 mile	Removing the obstructions will lift restrictions on instrument approaches and PAPI, but restriction would remain on the usability of the airport during low instrument weather conditions below 1 mile	Removing the obstructions will lift restrictions on instrument approaches and PAPI, but restriction would remain on the usability of the airport during low instrument weather conditions below 1 mile	Would severely limit the usability of the airport by the based business jet operator causing economic loss. No guarantee future instrument approaches would not be restricted.

Source: Consultant

5.2. Preferred Development Plan

Following the identification of the alternatives, the TAC met and discussed how best to depict future development on the ALP. This discussion resulted in a clear consensus amongst the group that Alternative 4 would be the most appropriate for the Airport and community moving forward for the long-term development of the airport and community. This alternative provides the airfield requirements by maintaining the existing runway lengths, meeting design standards, and clearing obstructions that limit instrument operations on the airport. It also considers a runway approach lighting system to Runway 24 to aid pilots in identifying the airport environment earlier during poor weather conditions. At this time, this instrument lighting system would likely have to be privately maintained, based on information available at the time of this writing. This was understood by the TAC who felt that it should still be depicted on the ALP, in case funding opportunities change in the future. The landside development area considered the following:

- Existing T-Hangar area is suitable.
- Additional future large clearspan hangar should be developed alongside of the existing taxiway on the west side of Runway 15-33, north of the last large clearspan hangar.
- The infield area between Runway 33 and Runway 6 and Runway 33 and Runway 24 should be considered for leasing for aviation related or non-aviation related development with landside access off the surrounding roadways. Any development in these areas needs to be consistent with limitations such as airspace requirements, not attract wildlife, inhibit visibility or create radio interference, compliant with grant assurances and receive necessary FAA approvals. If aviation related development, then connector taxiways would be appropriately developed to access the airfield. The County would work with the IDA to market this area for development. No known development is available at the time of the writing; thus the area is shown for planning purposes only. The portion of airport land on the north-west side of Middle Road is shown for non-aeronautical use.

Chapter Seven presents a much more detailed view of the proposed airport development through review of the Airport Layout Plan (ALP) set developed as part of this study effort. The ALP is a graphical representation of existing facilities and planned improvements. The ALP is reviewed and conditionally approved by the FAA regularly, and is one of the primary ways an airport communicates its compliance with design standards and development intentions with the FAA. Further, should any grant monies be sought, from the FAA or New York State Department of Transportation, for airport development purposes that development must be shown on the ALP drawing.

Chapter Six

Environmental Overview

6. ENVIRONMENTAL OVERVIEW

In addition to identifying airport projects that are financially and technically feasible, an important part of the master planning process is ensuring that future airport developments minimize impacts to the environment. Council on environmental Quality (CEQ) 1501.2 states, "*Agencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts.*" Accordingly, identifying potential environmental impacts of proposed airport projects has become an integral part of the master planning process. This environmental overview is prepared to identify potential environmental impacts associated with the proposed airport improvement projects, and to discuss potential mitigation measures that will be considered to minimize these impacts. This environmental overview discusses potential environmental impacts of the proposed airside improvements, as well as proposed landside developments identified in the previous Chapter.

This environmental overview was conducted in accordance with FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, FAA Order 1050.1E, *Environmental Desk Reference for Airport Actions*, which require the analysis of a number of environmental impact categories. Each of these is discussed in detail in the following sections.

FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, outlines types of impacts and thresholds that determine if an impact is considered to be significant. In general, project fall into one of the following three categories:

> ***CATEGORICAL EXCLUSIONS*** *- Projects that are categorically excluded include those actions that have been found under normal circumstances to have no potential for significant environmental impact.*
>
> ***ACTIONS NORMALLY REQUIRING AN ENVIRONMENTAL ASSESSMENT (EA)*** *- Projects that normally require an EA are actions that have been found to sometimes have significant environmental impacts.*
>
> ***ACTIONS NORMALLY REQUIRING AN ENVIRONMENTAL IMPACT STATEMENT (EIS)*** *- If a project is found to have significant impacts during the preparation of an EA, the FAA can determine that an EIS is required to investigate in greater detail a project's potential environmental impacts.*

For the purposes of this study, environmental impact categories will be discussed but addressed only as they apply specifically to DKK and its master development plan as outline in the previous chapters and will otherwise be noted as not applicable. In considering potential environmental impacts within this framework, this environmental overview identifies those categories that may warrant more detailed analysis in a formal EA.

6.1. Environmental Impact Categories Analysis

The following sections discuss the preliminary evaluation of the recommended airport development projects for each of the environmental impact categories included in FAA Order 1050.1E.

Air quality

Air quality is determined by the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. New FAA guidance, as outlined in Air Quality Handbook Version 3, requires an air emissions inventory if there are foreseeable emissions. The forecasts anticipate an increase in operations of about 0.4% annually, for a total increase of 1,615 operations over the planning horizon; while the facilities section identifies an increase in buildings, with associated building heaters, therefore there are foreseeable emissions, and as such an air emissions inventory will be required with the submission of the Categorical Exclusion for the individual project.

Temporary impacts from construction-related activities could be expected as part of some development initiatives and tree clearing. These impacts are anticipated to be minimal and could be mitigated by use of best management/construction practices. Temporary air quality impacts during these periods are likely to include, but not be limited to, wind-blown dust and equipment exhaust.

Coastal Resources

The NYS Coastal Boundary Map depicts the locations of the landward coastal boundary. There is a landward boundary to Lake Erie in the Chautauqua County area. The closest landward boundary to Dunkirk is about one-mile north of the airport, and no physical development at the airport would impact this resource.

Compatible Land Use

The majority of issues regarding compatible land use surrounding airports are based on noise impacts. However, other issues such as relocation of residences or businesses and alteration of floodplains, wetlands or critical habitat may also influence property surrounding the airport. For these reasons, the FAA requires that airports and airport sponsors seek compatible uses for the land surrounding that airport through zoning and municipal planning efforts. Forecast of aviation activity presented in Chapter 3 do not meet the threshold required to trigger the need for a noise analysis. Further, the Airport has received very few noise complaints in the previous years.

As discussed in Section 2.4 of this report, Airport property is mostly surrounded by vacant land with scattered commercial and residential development. The proposed development plan remains on airport property and therefore will not directly impact the surrounding lands. The local Town of Sheridan has zoning height restrictions in place.

Construction Impacts

Generally, during periods of development, extensive construction activities will occur. Construction activities may include, but are not limited to, earthmoving activities, delivery of equipment and materials, and removal of debris, etc. The potential for impacts to off-airport properties is greatest in the initial phase of development. These impacts may consist of increased traffic on local roads, noise, mud, dust, and other effects associated with the activity of heavy construction vehicles.

All potential impacts related to development projects are anticipated to be minor and temporary. Similarly, tree removal projects will have short-term construction impacts. Best practices should be utilized during each construction project to minimize the impact of any construction activities. These practices should be outlined in the Construction Bid Documents.

Department of Transportation Act: Section 4(f)

Section 4(f) of the USDOT Act of 1966 (Title 49, USC, Section 303) requires special considerations be made regarding the "use" of any publicly owned park, recreation area, wildlife/waterfowl refuge or historic property that is listed in or eligible for the National Register of Historic Places (National Register).

There are no Section 4f properties located in the vicinity of the Airport that would be impacted as a result of the preferred development plan.

Farmlands

The FAA requires an EA for an airport project that would convert land protected under the Farmland Protection Policy Act (FPPA) to non-agricultural use. Prime farmland is defined as land best suited for producing food, feed, forage, fiber, and oilseed crops.

Being a rural community, Agricultural District #2 is in Sheridan, Chautauqua County. The actual airport is not classified as farmland, but lands immediately adjacent to the airport are used for farming practices. The district surrounds the airport on the north and east, but outside the airport boundaries. No physical development at the airport would impact farmlands.

Biotic Communities

For development projects that impact wildlife (both flora and fauna) habitat, coordination with appropriate agencies is required. Projects that involve water resources such as wetlands, streams or groundwater, or projects that impact wildlife habitat, require coordination with the US Fish and Wildlife Service and the appropriate state agencies.

According to the US Fish and Wildlife Service there are no identified biotic species in Chautauqua County.

Endangered/Threatened Species

Chautauqua County, NY is a county identified to be located in the White Nose Syndrome (WNS) area for northern long-eared bat. The NY Natural Heritage Program website has not identified hibernacula in the project area. Tree removal projects would need to be coordinated with the US Fish and Wildlife Service, and meet the requirements of the Final 4(d) Rule for the threatened northern long-eared bat.

Floodplains

Floodplains are defined by the U.S. Environmental Protection Agency (EPA) and delineated by the Federal Emergency Management Agency (FEMA) which produces flood insurance rate maps for communities participating in the National Flood Insurance Program. A floodplain is the land area adjacent to a river or stream or other body of flowing water which is, on the average, likely to be covered with flood waters resulting from a 100-year frequency storm. Maintaining floodplains are critical in that they provide important flood water storage functions. Firm Map 361080B show floodplain around Beaver Creek, which runs under Runway 24 through a culvert. The remainder of the airport is zone c, which translated into no floodplain. Thus there would be no impact from the proposed development to this floodplain.

Hazardous Materials, Pollution Prevention, and Solid Waste

When improperly managed, solid waste can be detrimental to the environment. Planning of airport actions must account for collection, control and disposal of solid waste including construction debris.

Any tree removal can be chipped or sold, and the topsoil will be temporarily stored and re-used.

Historical, Architectural, Archeological, and Cultural Resources

The Archeological and Historic Preservation Act of 1974 provides for the preservation of historic American sites, buildings, objects, and antiquities of national significance by providing for the survey, recovery, and preservation of historical and archeological data which might otherwise be destroyed or irreparably lost due to a federal, federally licensed, or federally funded action. A review of data made available through the New York State Historic Preservation Office indicates that the airport lies outside any archeological sensitive area, and there are no listed places of historical significance on the airport. An environmental reconnaissance was conducted for the entire airport in 2000, with SHPO stating "No Effect" (See Appendix), as the airport is not in a historically/archaeologically sensitive area.

Light Emissions and Visual Impacts

Airport light emissions and the resulting glare from lighted, and flashing airport lighting facilities have the potential to adversely affect surrounding communities through visual impacts. Therefore, the FAA requires that light emissions be analyzed. The approach lighting system would be near adjacent property owners, and additional evaluation may be required.

Visual or aesthetic impacts are inherently more difficult to define because of the subjectivity involved. Aesthetic impacts deal more broadly with the extent that the development contrast with the existing environment and whether the jurisdictional agency considers this contrast objectionable. The overall development program is not anticipated to create any negative impacts with respect to light emissions or visual impacts.

Natural Resources, Energy Supply, and Sustainable Design

Energy and natural resources are scarce commodities, which may also be nonrenewable. The Airport Handbook requires that environmental analysis of airport development projects assess the impact to energy supplies and scarce naturally occurring materials.

The proposed development at the Airport is not anticipated to significantly affect the energy supply or natural resources. The largest demand requirements are expected to result from increased electrical requirements of additional hangar facilities, and approach lighting system.

Noise

Noise is the most apparent impact that an airport has on the environment with the majority of complaints coming from nearby residents. Noise is usually defined as unwanted sound; a definition that includes both the psychological and physical nature of the sound. Under certain conditions, noise may cause hearing loss, interfere with human activities at home and work, and may affect human health, and well-being in various ways. It is important that potential noise impacts be considered when planning for airport improvements.

The Airport does not have a history of noise complaints and does not anticipate the proposed improvement program to increase airport noise exposure on surrounding communities.

Induced Socio-Economic Impacts

Actions of the airport such as land acquisition can potentially have major effects on the surrounding community. Federal law requires that disruptive impacts be carefully evaluated as part of any proposed airport improvement project. Such induced impacts are those which may create shifts in population movement and growth patterns, public service and demand, and changed in commercial and economic activity.

No induced socio-economic impacts are anticipated as part of the proposed airport development program.

Water Quality

The Clean Water Act establishes regulatory authority and standards for controlling discharges to surface and groundwater. Planning airport actions must include appropriate management practices to prevent and mitigate potential water pollution. To the extent possible, FAA Order 5050.4B, *Airport Environmental Handbook*, requires consideration be given to the following: storm and sanitary sewer design, requirements for additional water supply or water treatment capacity, erosion controls to prevent siltation, provisions for containing oil spills and wastewater from aircraft washings, designs to preserve existing drainage or minimize dredge and fill, and locations with regard to surface and subsurface aquifers or sensitive ecological areas such as wetlands. Additional hangars, and development would need to consider the water quality impacts resulting from increased impervious surface.

Wetlands

Wetlands are areas that are flooded or have water near or at the surface of the ground, and are most commonly known as swamps, marshes and bogs. Wetlands perform functions and provide benefits that no other areas of the landscape can, such as supplying and purifying our drinking water. Wetlands also provide critical habitat for wildlife, and many animals depend entirely on wetlands for their survival, while others depend on wetlands for feeding, nesting, resting, or breeding purposes. As such, the protection of wetlands systems is of critical importance, and must be considered in relation to any airport improvement project.

The U.S. Fish and Wildlife Service (FWS) is the principal Federal agency that provides information to the public on the extent and status of the Nation's wetlands. This is accomplished through the National Wetlands Inventory (NWI) program. GIS data was obtained through the FWS NWI program as part of this study effort. According to the NWI map there is an isolated pocket of wetlands off the Runway 24 end. Field verification was conducted as part of the Runway 24 extension project, and necessary permits were obtained for the wetland impacts. Additionally the New York State Department of Environmental Conservation (NYSDEC) GIS portal was reviewed for state wetlands. None were found. Projects that occur on airport property should not have wetland impacts.

Wild and Scenic Rivers

As provided in the Wild and Scenic Rivers Act, “certain selected rivers of the nation which, with their immediate environments, possess outstandingly remarkable scenic recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations." The Act goes on to identify, and provide for recognition of, those river segments designated or eligible to be included in the Wild and Scenic Rivers System.

Neither Beaver Creek nor Scott Creek, both on or near the airport respectively, are listed as wild and scenic rivers.

6.2. Summary

This chapter serves as a cursory review of the potential for environmental impacts that may be associated with the proposed development at DKK. Further environmental studies, such as a CATEX or an EA will likely be necessary. Project-specific impacts and necessary mitigation measures will be determined and identified in those environmental documents.

Potential Impacts from the Preferred Alternative include:

- Air Quality from construction, additional building heaters and minimal increased operations
- Construction Impacts, short-term
- Endangered species, for development in open grassland areas and tree removal
- Light Emissions for ALS
- Water Quality for increased impervious surface

Chapter Seven

Airport Layout Plan Drawing Set

7. AIRPORT LAYOUT PLAN DRAWING SET

This chapter describes the Airport Layout Plan (ALP) drawing set developed as part of this study. These plans identify areas needed for aviation related development during and beyond the planning horizon. Additionally, available land on the Airport positioned to best serve non-aviation interest have been identified for the purpose of airport revenue diversification and regional economic development. These plan will also serve as a reference for the Chautauqua County to evaluate existing and/or future obstruction disposition in conjunction with Federal Aviation Administration (FAA) criteria. The ALP set presented becomes the official development plans for the Airport, which may be amended over time to reflect changes in the airfield environment or the demand affecting future facilities.

The ALP set consist of separate drawings which have been prepared on a computer assisted drafting system to graphically depict the recommended airfield improvements, imaginary surfaces, and the layout of future facilities. This ALP set is compliant with all pertinent criteria established by the FAA in Advisory Circular (AC) 150/5070-6B, *Airport Master Plans,* and AC 150/5300-13, *Airport Design*. Specifically, this drawing set includes:

- Cover Sheet
- Airport Data Sheet
- Existing Facilities Drawing
- Airport Layout Plan
- Inner Portion of the Approach Surface Drawing (Runway 6, 24, 15 and 33)
- Departure End of Runway (Runway 6, 24, 15 and 33)
- Part 77 Airspace Plan
- Terminal Area Plan
- On-Airport Land Use Plan
- Property Map

A half size (11"x17") version of the drawings is attached in **Appendix J.** Below is a brief discussion of each sheet.

7.1. Cover Sheet

The Cover Sheet serves as an introduction to the ALP set. This sheet includes the name of the Airport, a location map, vicinity map, and an index of drawings included in the ALP set.

7.2. Data Sheet

The Data Sheet is typically included in an ALP set when adequate space is not available on the ALP sheet to include all the necessary tabular information about the Airport and its facilities, as was the case for this project. The Data Sheet includes a variety of information relative to the Airport and its runways, taxiways, instrument approach capabilities, as well as operational and environmental conditions.

7.3. Existing Facilities

The existing facilities sheet identifies airport facilities as they existed during this planning study. This sheet identifies airfield pavement, markings, buildings, and safety areas, and was used to identify the Airports ability to meet design standards established for a B-II airfield.

7.4. Airport Layout Plan

The ALP is the primary planning document for the Airport and is a graphic representation, to scale, of existing and proposed Airport facilities, their location, dimensional and clearance data, and the overall infrastructure of the Airport including runways, taxiways, and aprons.

Once approved by the FAA the ALP becomes the official guidance for Chautauqua County for how to manage the development of the Airport while meeting state and federal obligations, ensuring the economic goals of the County are realized, and providing the greatest possible public benefit. The FAA refers to the ALP when considering grant applications for development assistance at the Airport as well as when analyzing the aeronautical impacts from some off-airport development near the Airport.

7.5. Inner Portion of the Approach Surfaces

The inner portion of the approach surface drawings display the existing and future approach surface configurations and their interaction with airport and off-airport environs. The extended runway centerline ground profiles and the critical point profiles are shown for terrain clearance purposes. Notable objects of height are identified in both the plan and profile views in each plan and are tabulated with object height and penetration information as well as future mitigation efforts if required. This drawing depicts the Part 77 approach surface and the Threshold Siting (20:1) Surface that is impacting existing night instrument operations. It also shows the PAPI Obstacle Clearance Surface for each runway equipped with a PAPI. These drawings are supplemental to the Part 77 Airspace Surface drawings.

7.5.1. Runway 6

Several trees were identified within the inner portion of the approach surface to Runway 6. At this point they are all outside existing easements or airport owned property.

7.5.2. Runway 24

Runway 24 was found to have several structures and trees that penetrate the Part 77 approach surface, and the threshold siting surface (TSS). Some of these trees lie within existing easements, while others are outside of airport control.

7.5.3. Runway 15

Several trees were identified within the inner portion of the approach surface to Runway 15. At this point they are all outside existing easements or airport owned property.

7.5.4. Runway 33

Runway 33 was found to have several trees that penetrate the Part 77 approach surface, and the threshold siting surface (TSS). These trees lie outside existing easements or airport owned property.

7.6. Departure End of Runway

The end of runway that is opposite the landing threshold. Departure end of runway, when clear, allow pilots to follow standard departure procedures. These plans will identify the obstructions to each surface. The airport has departure procedures written for each end.

7.7. Future FAR Part 77 Airfield Surfaces

Federal Aviation Regulations (FAR) Part 77, *"Objects Affecting Navigable Airspace,"* prescribes airspace standards which establish criteria for evaluating navigable airspace. Airport imaginary surfaces are established relative to the Airport and its runways. The size of each imaginary surface is based on the runway category with respect to existing and proposed visual, non-precision, or precision approaches for that runway. The space and dimensions of the respective approach surfaces are determined by the most demanding, existing or proposed, approach for each runway. The imaginary surfaces definitions include:

Primary Surface

The primary surface is a rectangular area symmetrically located about the runway centerline and extending a distance of 200 feet beyond each runway end. The elevation of the primary surface is the same elevation as the nearest point of the runway.

Horizontal Surface

The horizontal surface is an oval shaped area situated 150 feet above the published airport elevation. Its dimensions are determined by circles, either 5,000 feet or 10,000 feet in radius depending on the sophistication and utility of the runway, which are centered about the midpoint of each end of the primary surface. These circles are then connected by lines of tangent to enclose the limits of the horizontal surface.

Conical Surface

The conical surface is a sloped area originating at the edge of the horizontal surface and extending outward and upward at a slope of 20:1 for a horizontal distance of 4,000 feet.

Transitional Surfaces

These surfaces extend outward and upward at right angles to the runway centerline and centerline extended at a slope of 7:1 from the sides of the primary surface as well as from the sides of the approach surface. Transitional surfaces for those portions of the prevision approach, which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface at right angles to the runway centerline.

Approach Surface

This surface begins at the ends of the primary surface and slopes upward at a predetermined ratio while at the same time flaring out horizontally. The width and elevation of the inner ends conform to that of the primary surface, while the slope, length, and outer width are determined by the runway service category and existing or proposed instrument approach capabilities.

Analysis of the Part 77 surfaces surrounding the Airport was based upon base mapping captured for this study. As part of this analysis, objects that penetrated various Part 77 surfaces were identified and recommendations made for how to manage these obstructions.

7.8. Terminal Area Plan

The Terminal Area Plan presents an enlarged area of the ALP and illustrates existing and proposed building and apron facilities in greater detail. The Terminal Area Plan generally seeks to present a detailed view of the terminal building, aircraft parking aprons, automobile parking areas, general aviation (GA) and corporate hangars, and non-aviation development areas.

7.9. Airport Land Use Map

As discussed in the previous chapter, this planning effort engaged the TAC in a planning exercise looking at the best use of airport properties. The land use plan presented a synthesis of the TACs guidance relative to on-airport land use.

7.10. Property Map

The airport property map is intended to depict the areas of existing airport sponsor ownership and areas proposed for ownership or release. The map also shows easement, buildings, aprons, fences, roads, and other features of concern. Parcels are shown for depiction purposes only and this map is not intended to be used for survey or land acquisition purposes. Property information includes ownership, date of acquisition, and federal involvement if applicable. The property map identifies future easements to control obstructions.

7.11. Summary of Changes to the ALP Set

Since the last ALP update was prepared for Chautauqua County – Dunkirk Airport a variety of development actions have been added to, or removed from, the current ALP set shown in this chapter. The most substantive of these changes are itemized below:

- Removal of Runway extension to Runway 33 end
- Removal of future aircraft apron development near Runway 33
- Removal of extending parallel taxiway to Runway 6 end
- Removal of relocating wind direction indictor resulting from extending parallel taxiway to Runway 6 end
- Maintain an approach lighting system to Runway 24
- Maintain hangar development in main terminal area
- Add: Set aside surplus land for aviation related or non-aviation development that doesn't conflict with airspace

Chapter Eight

Development Phasing and Capital Improvement Program

8. DEVELOPMENT PHASING & CAPITAL IMPROVEMENT PROGRAM

The preceding chapters have identified the project necessary for the Chautauqua County – Dunkirk Airport to accommodate the forecast levels of demand and provide for substantive economic development opportunities in the future. As discussed in Chapter 4, specific improvements to both airside and landside elements of the Airport are recommended for implementation over the 20-year planning period. The project included in the development plan form the basis of the Airport' capital improvement program (CIP).

It is the primary purpose of this chapter to: (1) itemize the individual development projects or development related projects required to fulfill the preferred development plan for the Airport as depicted in the Airport Layout Plan (ALP); (2) establish a phasing plan for the development projects which meets the forecasted needs; (3) review available funding sources and make assumptions as to the probable funding structure for each itemized project; (4) summarize recent and future potential cash flows for the airports; and (5) present a financially feasible CIP for each development phase.

The CIP includes projects that represent the facility's planned growth over the next 20+ years. Additionally, the proposed facilities reflect strategic development initiatives intended to maximize the safety and utilization of the Airport. As part of the development process, project phasing and cost estimates are developed and included in the CIP in order to manage and plan for the implementation requirements associated with these development projects.

8.1. Development Phasing

This section of the Airport's master plan report seeks to establish a tentative schedule for the various projects required to fulfill the future development goals of the Chautauqua County – Dunkirk Airport. Essentially the schedule represents a prioritized Airport development plan to meet regulatory issues, forecast increases in aeronautical activity, and/or economic development initiatives of the municipality. Naturally, projects appearing in the first phase are of the greatest importance to the Airport and have the least tolerance for delay. Additionally, some projects included in an early phase may be a prerequisite for other planned improvements in a later phase. The development phasing has been divided into four distinct phases as follows:

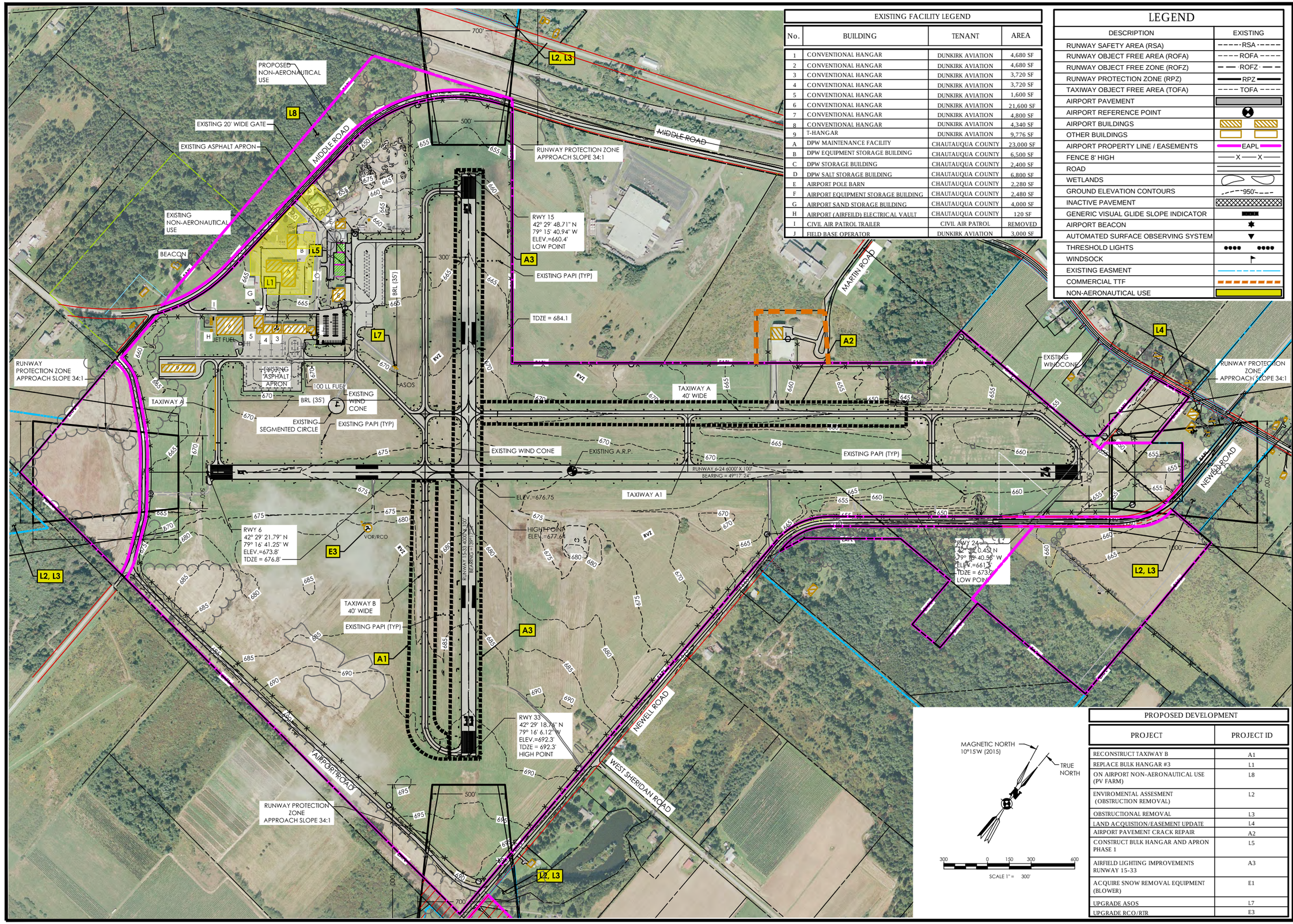
- Phase I: (0 to 5 years), 2016-2020
- Phase II: (6 to 10 years), 2021-2025
- Phase III: (11 to 20 years), 2026-2035
- Phase IV (Beyond 20 years), 2036+

It should be pointed out here, however, that the phasing of individual projects should undergo periodic review to determine the need for changes based upon variations in forecast demand, available funding, economic conditions, and/or other factors that may reasonably influence airport development. Additionally, other projects not foreseen in this report may be identified in the future and would, therefore, likely necessitate changes in the phasing of projects and the overall CIP. Further, the projects and overall development identified in the CIP, though tied to a time table, will only occur once the triggering demand and/or need is realized. The useful life of a facility or equipment being rehabilitated, reconstructed or replaced must have been met in order for the project to receive AIP funding. Phasing for the projects included in the development plan is shown in **Table 8-1. Figure 8-1** is a graphic presentation of the short-term development projects. Appendix E contains the pavement history map and FAA Order 5100.38D table of Minimum Useful Life.

Table 8-1. Phased Development Plan Matrix

PROPOSED DEVELOPMENT ACTION:	PHASE I (2016-2020)	PHASE II (2021-2025)	PHASE III (2026-2035)	PHASE IV (2036+[1])
ID # AIRSIDE				
A-1 Reconstruct Taxiway B south, from Runway 6-24 toward Rwy 33	☐			
A-2 Airfield Pavement Crack Repair and Seal Coat Twy A	☐			
A-3 Upgrade Airfield Lighting, including REILs Rwy 15 and 33 and airfield control in FBO Building	☐			
A-4 Environmental Assessment for MALSR*		☐		
A-5 Rehabilitate Taxiway A (from Rwy 15-33 to A1) and A2		☐		
A-6 Install MALSR Runway 24		☐		
A-7 Rehabilitate/Reconstruct Runway 15-33		☐		
A-8 Rehabilitate/Reconstruct Runway 6-24 (original 5,000')			☐	
A-9 Rehabilitate/Reconstruct Runway 6-24 (1,000' extension Rwy 24)			☐	
A-10 Rehabilitate/ Reconstruct Taxiway B north			☐	
A-11 Rehabilitate/ Reconstruct Taxiway A (from Rwy 15-33 to Rwy 6)			☐	
A-12 Rehabilitate Transient Apron			☐	
A-13 Rehabilitate T-hangar taxilane			☐	
A-14 Upgrade Fuel Farm			☐	
A-15 Rehabilitate Terminal Apron				☐
A-16 Upgrade Airfield Lighting				☐
ID #LANDSIDE				
L-1 Replace Hangar #3	☐			
L-2 Environmental Assessment for Obstruction Removal	☐			
L-3 Obstruction Removal to 20:1 and PAPI OCS	☐		☐	
L-4 Land Acquisition: acquire easements for RPZ	☐			
L-5 GA Hangar Development and associated apron	☐	☐	☐	☐
L-6 Environmental Assessment for developable land development (once identified)		☐		
L-7 Upgrade ASOS to report weather automatically	☐			
L-8 On airport development (developable lands)	☐	☐	☐	☐
L-9 Rehabilitate airport access road			☐	
L-10 Rehabilitate terminal area parking lot				☐
ID #SUPPORT EQUIPMENT[2]				
E-1 Snow Removal Equipment	☐		☐	
E-2 Mowing Equipment		☐		☐
E-3 Upgrade RCO/RTR to communicate with Buffalo Approach	☐			

Note: 1) Development phased in the 2035+ period could potentially be developed at anytime in the future should adequate demand/ opportunity exist.
Source: Passero, 2015.
2) Support Equipment is not shown in the ALP but listed here for future funding consideration
**ALS evaluation can't be completed until Runway 24 is upgraded to LPV*



EXISTING FACILITY LEGEND

No.	BUILDING	TENANT	AREA
1	CONVENTIONAL HANGAR	DUNKIRK AVIATION	4,680 SF
2	CONVENTIONAL HANGAR	DUNKIRK AVIATION	4,680 SF
3	CONVENTIONAL HANGAR	DUNKIRK AVIATION	3,720 SF
4	CONVENTIONAL HANGAR	DUNKIRK AVIATION	3,720 SF
5	CONVENTIONAL HANGAR	DUNKIRK AVIATION	1,600 SF
6	CONVENTIONAL HANGAR	DUNKIRK AVIATION	21,600 SF
7	CONVENTIONAL HANGAR	DUNKIRK AVIATION	4,800 SF
8	CONVENTIONAL HANGAR	DUNKIRK AVIATION	4,340 SF
9	T-HANGAR	DUNKIRK AVIATION	9,776 SF
A	DPW MAINTENANCE FACILITY	CHAUTAUQUA COUNTY	23,000 SF
B	DPW EQUIPMENT STORAGE BUILDING	CHAUTAUQUA COUNTY	6,500 SF
C	DPW STORAGE BUILDING	CHAUTAUQUA COUNTY	2,400 SF
D	DPW SALT STORAGE BUILDING	CHAUTAUQUA COUNTY	6,800 SF
E	AIRPORT POLE BARN	CHAUTAUQUA COUNTY	2,280 SF
F	AIRPORT EQUIPMENT STORAGE BUILDING	CHAUTAUQUA COUNTY	2,480 SF
G	AIRPORT SAND STORAGE BUILDING	CHAUTAUQUA COUNTY	4,000 SF
H	AIRPORT (AIRFEILD) ELECTRICAL VAULT	CHAUTAUQUA COUNTY	120 SF
I	CIVIL AIR PATROL TRAILER	CIVIL AIR PATROL	REMOVED
J	FIELD BASE OPERATOR	DUNKIRK AVIATION	3,000 SF

LEGEND

DESCRIPTION	EXISTING
RUNWAY SAFETY AREA (RSA)	RSA
RUNWAY OBJECT FREE AREA (ROFA)	ROFA
RUNWAY OBJECT FREE ZONE (ROFZ)	ROFZ
RUNWAY PROTECTION ZONE (RPZ)	RPZ
TAXIWAY OBJECT FREE AREA (TOFA)	TOFA
AIRPORT PAVEMENT	
AIRPORT REFERENCE POINT	
AIRPORT BUILDINGS	
OTHER BUILDINGS	
AIRPORT PROPERTY LINE / EASEMENTS	EAPL
FENCE 8' HIGH	X X
ROAD	
WETLANDS	
GROUND ELEVATION CONTOURS	950'
INACTIVE PAVEMENT	
GENERIC VISUAL GLIDE SLOPE INDICATOR	
AIRPORT BEACON	
AUTOMATED SURFACE OBSERVING SYSTEM	
THRESHOLD LIGHTS	
WINDSOCK	
EXISTING EASMENT	
COMMERCIAL TTF	
NON-AERONAUTICAL USE	

PROPOSED DEVELOPMENT

PROJECT	PROJECT ID
RECONSTRUCT TAXIWAY B	A1
REPLACE BULK HANGAR #3	L1
ON AIRPORT NON-AERONAUTICAL USE (PV FARM)	L8
ENVIROMENTAL ASSESMENT (OBSTRUCTION REMOVAL)	L2
OBSTRUCTIONAL REMOVAL	L3
LAND ACQUISITION/EASEMENT UPDATE	L4
AIRPORT PAVEMENT CRACK REPAIR	A2
CONSTRUCT BULK HANGAR AND APRON PHASE 1	L5
AIRFIELD LIGHTING IMPROVEMENTS RUNWAY 15-33	A3
ACQUIRE SNOW REMOVAL EQUIPMENT (BLOWER)	E1
UPGRADE ASOS	L7
UPGRADE RCO/RTR	E3

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Project Manager Lisa Cheung
Designed by Wayne B. Zian

Revisions

No.	Date	By	Description

Short-Term Development

Master Plan Update

Chautauqua County
Dunkirk Airport

Town/City: Sheridan
County: Chautauqua State: New York

Project No.
95019.46

Drawing No.
Fig.8-1

Date
May 2017

8.2. Capital Improvement Program

The objective of this section is to outline the CIP for DKK over the 20 years and beyond, while providing a brief description of the projects included and rationale for their priority within the CIP. Special attention has been placed on the first five years of the CIP. These projects slated for immediate implementation have been identified as critical to the Airport in terms of both providing adequate facilities to meet the needs of its users, as well as supporting the strategic economic development initiatives of the Airport and its surrounding community.

Near-Term Capital Improvement Program (2016-2020)

In the first five years of the CIP a number of projects are identified. These primarily include rehabilitating taxiway B south, seal coating pavement, purchasing equipment, acquiring easements to remove obstructions that are limiting night instrument approaches and use of the PAPI, and connecting the airport with Buffalo Approach control through an upgraded RCO/RTR. **Table 8-2** identifies Phase I projects, their estimated cost, and the funding participation from federal, state, local, or other agencies which may be anticipated for each specific project.

Mid-Term Capital Improvement Program (2021-2025)

The second five years of the CIP includes installing an approach lighting system to Runway 24, rehabilitating Runway 15-33, hangar development and marketing of developable airport lands. **Table 8-3** identifies Phase II projects, their estimated cost, and the funding participation from federal, state, local, or other agencies which may be anticipated for each specific project.

Long-Term Capital Improvement Program (2026-2035)

In the second decade of the CIP largely revolves around continued development of developable airport land, construction of hangar facilities, and long-term maintenance of pavements. **Table 8-4** identifies Phase III projects, their estimated cost, and the funding participation from federal, state, local, or other agencies which may be anticipated for each specific project.

Ultimate Future Capital Improvement Program (Beyond 2035)

Beyond 2035 a number of projects are identified. These primarily include development of hangars, development of non-aviation properties, and the continued rehabilitation of pavement surfaces as they near their useful lives. Some of these improvements however may be required much earlier than 2034 as a result of expressed demand. Anticipated costs and funding shares for these projects however were not developed as part of this study effort.

Table 8-2. Near-Term Capital Improvement Program

PHASE	YEAR	PROJECT	PROJECT ID	TOTAL COST	ANTICIPATED FUNDING SOURCES			
					FAA	NYSDOT	LOCAL	3RD PARTY
PHASE 1	2016-2020	Reconstruct Taxiway B	A1	$1,200,000	90%	5%	5%	0%
					$1,080,000	$60,000	$60,000	$ -
	2016-2020	Replace Bulk Hangar #3	L1	$572,000	0%	90%	10%	0%
					$ -	$514,800	$57,200	$ -
	2017-2020	Environmental Assessment (Obstruction Removal)	L2	$100,000	90%	10%	10%	0%
					$90,000	$5,000	$5,000	$ -
	2018-2020	Obstruction Removal	L3	$200,000	90%	10%	10%	0%
					$180,000	$10,000	$10,000	$ -
	2018-2020	Land Acquisition/Easement Update (Rwy 24)	L4	$250,000	90%	5%	5%	0%
					$225,000	$12,500	$12,500	$ -
	2018-2020	Airport Pavement Crack Repair (Twy A)	A2	$250,000	90%	5%	5%	0%
					$225,000	$12,500	$12,500	$ -
	2018-2020	Construct Bulk Hangar and Apron – Phase 1	L5	$800,000	0%	90%	10%	0%
					$ -	$720,000	$80,000	$ -
	2018-2020	Airfield Lighting Improvements Rwy 15-33	A3	$300,000	90%	5%	5%	0%
					$270,000	$15,000	$15,000	$ -
	2019-2020	Acquire Snow Removal Equipment (Blower).	E1	$150,000	90%	5%	5%	0%
					$135,000	$7,500	$7,500	$ -
	2019-2020	Upgrade ASOS	L7	$25,000	90%	5%	5%	0%
					$22,500	$1,250	$1,250	$ -
	2019-2020	Upgrade RCO/RTR	E3	$50,000	90%	5%	5%	0%
					$45,000	$2,500	$2,500	$ -
			PHASE 1 TOTAL:	**$3,947,000**	**$2,182,500**	**$1,491,050**	**$273,450**	**$ -**

Table 8-3. Mid-Term Capital Improvement Program

PHASE	YEAR	PROJECT	PROJECT ID	TOTAL COST	ANTICIPATED FUNDING SOURCES			
					FAA	NYSDOT	LOCAL	3RD PARTY
PHASE 2	2021-2025	Rehabilitate Taxiway A (from 15-33 to A1) and A2	A5	$975,000	90%	5%	5%	0%
					$877,500	$48,750	$48,750	$ -
	2021-2025	Environmental Assessment for ALS *	A4	$200,000	90%	5%	5%	0%
					$180,000	$10,000	$10,000	$ -
	2021-2025	Install ALS Rwy 24*	A6	$750,000	90%	5%	5%	0%
					$675,000	$37,500	$37,500	$ -
	2021-2025	Rehabilitate/Reconstruct Runway 15-33	A7	$1,500,000	90%	5%	5%	0%
					$1,350,000	$75,000	$75,000	$ -
	2021-2025	Construct Bulk Hangar and Apron- Phase 2 **	L5	$650,000	0%	90%	10%	0%
					$ -	$576,000	$64,000	$ -
	2021-2025	Environmental Assessment for Developable Lands***	L6	$150,000	90%	5%	5%	0%
					$135,000	$7,500	$7,500	$ -
	2021-2025	On airport development (developable land) – Phase 1	L8	$1,500,000	0%	0%	0%	100%
					$ -	$ -	$ -	$1,500,000
	2021-2025	Acquire Mowing Equipment	E2	$30,000	0%	90%	10%	0%
					$ -	$27,000	$3,000	$ -
		PHASE 2 TOTAL:		**$5,755,000**	**$3,217,500**	**$790,750**	**$246,750**	**$1,500,000**

Notes: *ALS requires Rwy 24 to be upgraded to LPV first. Funding of the ALS may not be eligible for FAA funding, at which case it would need to be funded locally or with 3rd party dollars

** Bulk hangars can be funded by 3rd part dollars if a state grant is not available

*** Development on "Developable Lands" need to be identified before EA can be completed

Table 8-4. Mid-Term Capital Improvement Program

PHASE	YEAR	PROJECT	PROJECT ID	TOTAL COST	ANTICIPATED FUNDING SOURCES			
					FAA	NYSDOT	LOCAL	3RD PARTY
PHASE 3	2026-2035	Rehabilitate/Reconstruct Rwy 6-24 (original 5,000')	A8	$1,700,000	90%	5%	5%	0%
					$1,530,000	$85,000	$85,000	$ -
	2026-2035	Rehabilitate/Reconstruct Rwy 6-24 (1,000' extension)	A9	$340,000	90%	5%	5%	0%
					$306,000	$17,000	$17,000	$ -
	2026-2035	Rehabilitate/Reconstruct Taxiway B north	A10	$320,000	90%	10%	10%	0%
					$288,000	$16,000	$16,000	$ -
	2026-2035	Obstruction Removal	L3	$200,000	90%	10%	10%	0%
					$180,000	$10,000	$10,000	$ -
	2026-2035	Rehabilitate/Reconstruct Twy A (Rwy 15-33 to Rwy 6)	A11	$400,000	90%	5%	5%	0%
					$360,000	$20,000	$20,000	$ -
	2026-2035	Rehabilitate Transient Apron	A12	$725,000	90%	5%	5%	0%
					$652,500	$36,250	$36,250	$ -
	2026-2035	Rehabilitate T-hangar taxilane	A13	$350,000	90%	5%	5%	0%
					$315,000	$17,500	$17,500	$ -
	2026-2035	Install Above Ground Fuel Tank	A14	$600,000	0%	90%	10%	0%
					$ -	$540,000	$60,00	$ -
	2026-2035	On airport development (Developable land) – Phase 2	L6	$1,500,000	0%	0%	0%	100%
					$ -	$ -	$ -	$1,500,000
	2026-2035	Rehabilitate Airport Access Road	L9	$400,000	90%	5%	5%	0%
					$360,000	$20,000	$20,000	$ -
	2026-2035	Purchase Snow Removal Equipment	E1	$150,000	0%	90%	10%	0%
					$ -	$135,000	$15,000	$ -
	2026-2035	Construct Bulk Hangar and Apron – Phase 3 **	L5	$365,000	0%	90%	10%	0%
					$	$328,500	$36,500	$ -
		PHASE 3 TOTAL:		**$6,450,000**	**$3,991,500**	**$1,225,250**	**$333,250**	**$1,500,000**

** Bulk hangars can be funded by 3rd part dollars if a state grant is not available

Financial Feasibility

The purpose of this section is to analyze the Airport's historical and projected revenues and expenditures and validate the financial feasibility of implementing the Capital Improvement Plan identified through this master plan. This is done to express the feasibility of the capital improvement program identified for the Airport and ensure a fiscally responsible development program.

8.2.1. Sources of Capital Funding

Funding sources for the capital improvement program depend on many factors, including Airport Improvement Program (AIP) project eligibility, the ultimate type and use of facilities to be developed, debt capacity of the Airport, the availability of other financing sources, and the priorities for scheduling project completion. For planning purposes, assumptions were made related to the funding source of each capital improvement. Some of the funding programs which may be available for identified CIP projects at the Airport are discussed below.

8.2.1.1. AIP Funds

The Airport Improvement Program (AIP) provides grants to airport sponsors for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS). The AIP program is 100 percent funded by the Airport and Airway Trust Fund (AATF), the revenue of which are derived from aviation-related excise taxes on passengers, cargo, and fuel. In addition to AIP, AATF also provides over two-thirds of funding for the FAA.

Entitlement Grants

As a public airport listed in the NPIAS, DKK is entitled to an annual allotment from AIP to support the continued maintenance and development of the Airport. As a non-primary general aviation airport DKK is entitled to receive annually the lesser value of the following:

- 20% of the 5-year cost of their current NPIAS value or,
- $150,000

Most often airports such as DKK will receive $150,000 annually.

Discretionary Grants

After entitlement funding is accounted for the FAA allocates the remainder of its budgeted AIP expenditure to a discretionary fund. After a grant application is submitted by the airport sponsor, the FAA distributes discretionary funds to projects that best carry out the purpose of the AIP with highest priority given to safety, security, reconstruction, capacity, and standards. For small primary, reliever, and general aviation airports, the grant covers a range of 90-95 percent of eligible costs based on statutory requirements.

8.2.1.2. FAA Facilities and Equipment Funds

Facilities & Equipment (F&E) funds finance major capital investments related to modernizing and improving air traffic control and airway facilities, equipment, and system. The F&E appropriation provides funds to establish, replace, relocate, or improve air navigation facilities and equipment and aviation safety systems based on their operational uses.

8.2.1.3. New York Aviation Grant Program

New York State Department of Transportation has, in recent history, facilitated an annual aviation capital grants program focused on financially supporting projects aimed at preserving and improving the airport infrastructure in support of safety, preservation of assets, and the economic health of the localities and the state. Over the last few years $7 million dollars has been appropriated to this fund each year and supported a number of significant airfield projects across the state. As a cost sharing grant program, airports requesting financial support will also need to financially support the project. As a general aviation airport Chautauqua County-Dunkirk Airport could expect 90

percent state funding for eligible project cost. Eligible projects must have a service life of at least 10 years. Type of projects include:

- Construction, reconstruction, improvement, reconditioning, and preservation of capital facilities, including revenue producing facilities.
- Pavement maintenance/management projects.
- Purchase of airport equipment. Equipment acquired must be operated and stored on airport property.
- Purchase and installation of navigational aids.

In addition, eligible projects must be depicted on the Airport's approved ALP and must result in a completed usable product, as applications for partial or phased projects are not allowed under this program.

Furthermore, grants under this program are subject to the limitations specified below:

- The State share for any project awarded as part of this program shall not exceed $1 million.
- A maximum of one project will be awarded per airport per grant year.

8.2.1.4. Chautauqua County Economic Development Initiative

Chautauqua County's Vision 20/20 Plan seeks to implement recommendations of the new business plan for airports specifically by providing hangar space at Dunkirk Airport to attract jet aircraft owners from Buffalo Airport's, with particular interest in industrial/commercial customers. There was discussion to private options of the airport that stem from the 2011 Special Regulatory Commission for Airports. Goal is to attract industrial and office development at Dunkirk Airport.

8.2.1.5. Third Party

A variety of projects depicted on the ALP are anticipated to be developed with private or third party funding. These primarily include development of corporate hangars and private aprons to support those hangars.

8.2.1.6. Airport

The Airport will fund all remaining capital project amounts from annual earning or reserves.

8.2.2. Airport Financial Structure

Chautauqua County- Dunkirk Airport is owned and sponsored by Chautauqua County, New York. The County operates the Airport as a sub-department within the County budget. Essentially the Airport operates as a business with capital grants from FAA and NYSDOT. Internal funds are typically obtained from ground leases, fuel flowage fees, and other fees and charges levied on Airport users and tenants. While future sources of revenue cannot be guaranteed, this analysis is based upon the expected Airport operations and improvement.

Airport Operations complies with the requirements of the FAA regarding open access to users, non-exclusive rights, the setting of fees and charges, and airport revenue.

8.3. Conclusion

This financial analysis is based on continued FAA and State funding at current levels. However, there is competition for FAA funds, so the Airport will need to aggressively market its CIP to the FAA and other agencies as opportunities arise. Based on the financial analysis performed above, the County will have limited resources to undertake large capital improvement projects. Safety related projects should be addressed in the near term. These projects will be significantly lower than major capital improvements projects, but will provide for continued usability of the airport.

The County needs to examine its income and expenses to improve the bottom line for airport operations. As major capital improvement projects are the costliest to the County, these projects should be set in future years (as long as it doesn't jeopardize safety and usability of the airport) until the economic bottom line can be improved. Airport revenues are significantly lower than the expenses. Improving airport revenue may require the airport review its

sources of revenues and re-evaluate the rates and fees associated with such sources. On the other side of the economic equation is lowering expenses. Most expenses are related to employees and benefits, with additional higher levels of expenses for electricity and vehicle maintenance. County should review the expenses to determine how to streamline services thus lowering expenses.

One way the County can improve its economic bottom line is to lease developable airport land for development. With the decommissioning of the VOR a large area of land between Runway 6 and 33 will become available, that has immediate roadway access. Similarly, there are lands between Runway 33 and Runway 24 with roadway access that could be developed as well. These lands should be marketed by the Chautauqua County Department of Planning and Economic Development to aid in the financial bottom line for the Chautauqua County-Dunkirk Airport. When lights are replaced fixtures should be upgraded to LED to defray electrical costs.

The County has undertaken a separate study, outside this document, that may help identify ways to improve their bottom line.

Appendices

Appendix A

Scoping Meeting Notes (11/25/14)

Lisa Cheung

From: Lisa Cheung
Sent: Tuesday, November 25, 2014 1:39 PM
To: Bill Tucker (tuckerb@co.chautauqua.ny.us); 'Dan Reininga'; Louis Nalbone (LJNalbone@DKK.com)
Cc: Mary Kay Genthner
Subject: Chautauqua County/Dunkirk Airport Master Plan
Attachments: TAC #1 Agenda.pdf; TAC #1 Study Timeline.pdf; TAC #1 Workbook.pdf

Importance: High

Gentlemen,

On behalf of Chautauqua County, thank you for agreeing to be on the Technical Advisory Committee (TAC) for Chautauqua County/Dunkirk Airport's Master Plan Update. I am the airport planner that will be the liaison between the County and the FAA to provide the necessary documentation. The overarching goal of this study is to determine how Chautauqua County/Dunkirk Airport can best position itself to provide for safe, reliable, and efficient aeronautical operations, accommodate growing and changing aeronautical demands, and remain a good neighbor and vital community asset.

To complete this study your input is needed. Members of this committee will meet, via email and in person, with the consulting team and be fully engaged in the establishment of a long term development plan for the Airport. Your knowledge of the Chautauqua County/Dunkirk Airport, as well as its local and regional communities, will be an invaluable asset to this project.

The preliminary schedule identifies a total of three (3) TAC meetings, including:

- TAC #1 – Goals & Objectives / Guided Q&A / SWOT Analysis (via email)
- TAC #2 – Inventory, Forecast, and Facility Requirement Review / Identification of Development Alternatives (via email)
- TAC #3 – Evaluation of Development Alternatives / Selection of Preferred Development Plan (in person)

Attached you will find the information for the TAC #1 meeting (see TAC #1 Agenda.pdf)

Study Overview and timeline: A Master Plan is divided into three workable area: Investigation/Recommendation/Implementation, and will take about a year to complete, pending FAA approvals. (see TAC #1 Study Timeline.pdf)

Steps: (see TAC#1 Workbook.pdf)

1. Currently we are in the investigation phase, working on goal setting and gathering existing conditions and issues. Within the attached workbook you will find a goals and objective worksheet, along with a Guided Q&A and SWOT analysis. I have taken the liberty to fill out the goals and objective worksheet, but any additional goals you would like to see addressed please add. I would appreciate if you could take the time to fill out the Guided Q&A and SWOT analysis. The SWOT analysis will provide me with additional insight into the local and regional community issues. Once I receive your comments from the Guided Q&A and SWOT analysis, I can incorporate those with the data collection of existing inventory and prepare aviation forecasts. These elements make up Interim Report #1. Once complete a copy of the report will be sent to each of you for review, and then sent to the FAA for approval of the forecasts.

2. Once the forecasts are approved, we can move onto the last element of investigation and that is comparing the existing inventory against forecast demand to ultimately determine future development. Once we know what we need to build then we move into the recommendation phase, and determine alternative plans to address the needed improvements. Additional correspondence, and an in person meeting, will occur during this preparation to ensure that development is cohesive with County plans. After we know where the improvements will go we then perform a brief environmental overview to identify areas of potential concern. This creates Report #2. Again this will be circulated to each of you. The report is then sent to the FAA for review.

3. We then move into the final implementation phase – how to fund the capital improvements and preparation of the ALP drawing set. At the completion of this phase a Draft Final Report will be prepared and circulated to each of you for review and comment, before being circulated to the FAA/NYSDOT.

The overall purpose of the ALP is to provide a 20 year graphic development plan that the FAA/NYSDOT can use to fund future development projects.

Next steps:

- TAC members provide filled out Guided Q&A and SWOT analysis by **Dec 12**.
- Gather existing facility information, TAC member information and prepare forecasts
- Document findings in Report #1. Send email to TAC members (anticipated late Jan/early Feb)

If you have any questions throughout the preparation of this report please contact me. I look forward to working with you on this project.

Regards,

Lisa M. Cheung, LEED Green Associate
Airport Planner

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AGENDA

Airport Layout Plan Update

Technical Advisory Committee Meeting #1

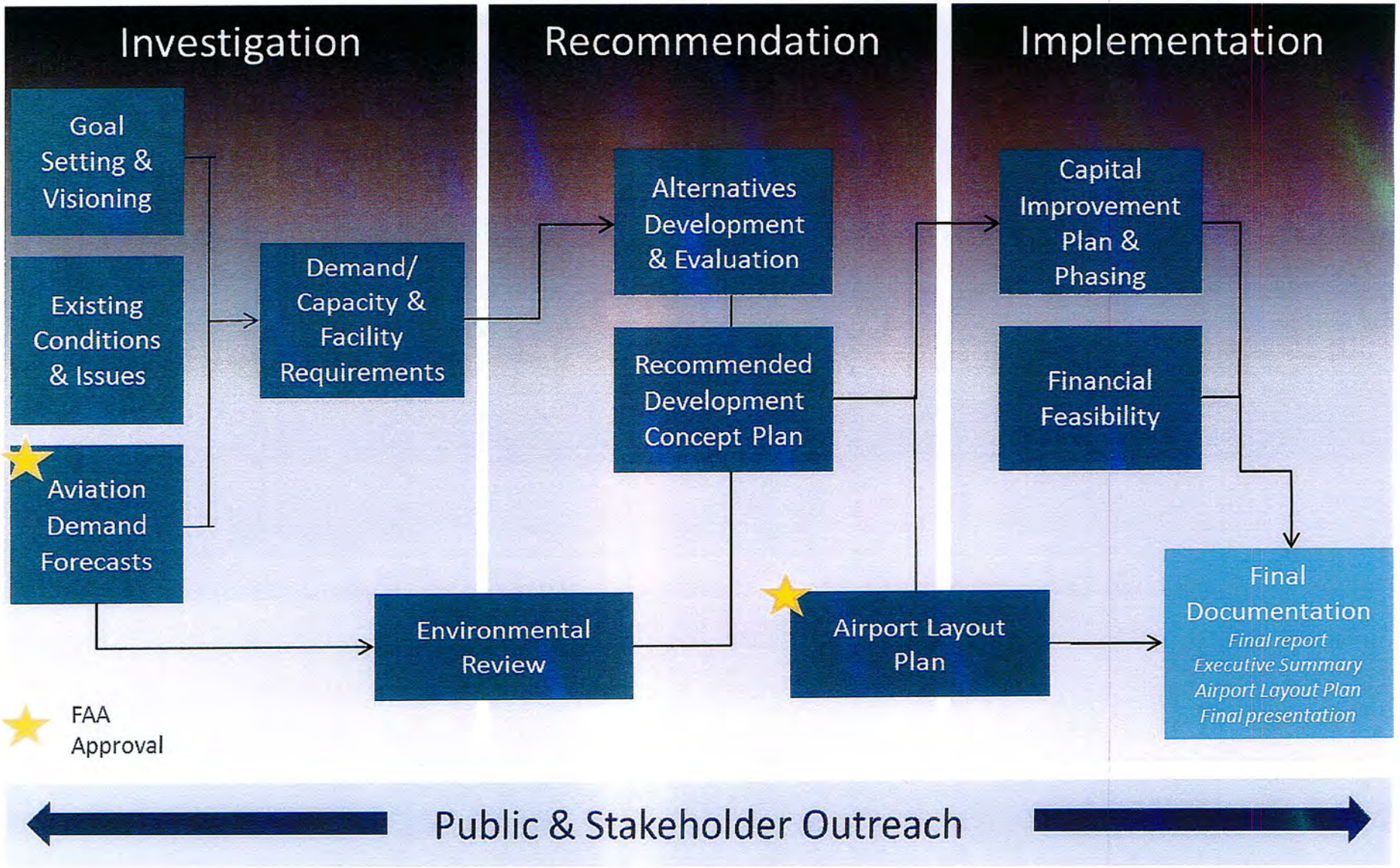
November 25, 2014

1. Introductions
    a. Study Overview and Timeline
2. TAC Workbook Section
    a. Goals and Objectives
    b. Guided Q & A Worksheet
    c. SWOT Analysis
3. Next Steps
    a. Documentation for Phase 1 report: existing facilities and forecasts
    b. Distribution of Phase 1 report to TAC, then onto FAA

NOTES:

CHAUTAUQUA COUNTY-DUNKIRK AIRPORT

Airport Planning Process



Technical Advisory Committee Meeting #1

11/25/2014

Goal and Objective Worksheet

The overarching goal of this study is to determine how DKK can best position itself to provide for safe, reliable, and efficient aeronautical operations, accommodate growing and changing aeronautical demands, and communicate the Airport vision with community stakeholders so as to maximize synergies and protect aeronautical operations. From this, a number of independent goals can be identified. Our goal here is to further define those goals by identifying a number of specific objectives for each.

GOAL #1 – PROVIDE AN AIRPORT THAT IS SAFE, RELIABLE.

- **Objective #1 – Protect FAA mandated safety areas around the airfield.**
- **Objective #2 – Ensure that facilities meet the demands of the most demanding aircraft making regular use of the facilities.**
- **Objective #3 – Minimize obstructions to air navigation**

GOAL #2 – PROVIDE A LONG-TERM DEVELOPMENT PLAN WHICH MINIMIZES NEGATIVE ENVIRONMENTAL IMPACTS.

- **Objective #1 – Identify the major environmental issues of concern.**
- **Objective #2 – Minimize potential environmental impacts through thoughtful development planning**
- **Objective #3 – Provide a facility that minimizes adverse effects on intangible environmental concerns**

GOAL #3 – DEVELOP THE AIRPORT THAT SUPPORTS LOCAL AND REGIONAL ECONOMIC GOALS WHILE ACCOMMODATING NEW OPPORTUNITIES OR SHIFTS IN DEVELOPMENT PATTERNS.

- **Objective #1 – Develop an ALP that easily integrates with existing and proposed transportation infrastructure.**
- **Objective #2 – Provide a highly graphical, easily understood ALP update narrative and ALP set to enable the County to communicate the Airport's development initiatives.**

- **Objective #3 – Pre-position the Airport to benefit from a broad range of funding sources including state and federal agencies.**

GOAL #4 – ENGAGE AIRPORT STAKEHOLDERS IN THE VISIONING AND PLANNING PROCESS.

- **Objective #1 – Establish Technical Advisory Committee (TAC) as part of the ALP update process.**
- **Objective #2 – Integrate the contributions of the TAC into the ALP update.**

Lisa Cheung

From: Lisa Cheung
Sent: Thursday, January 29, 2015 12:54 PM
To: Bill Tucker (tuckerb@co.chautauqua.ny.us); Carl Bjurlin; Dan Reininga; Louis Nalbone (LJNalbone@DKK.com)
Cc: Mary Kay Genthner
Subject: Master Plan Report #1
Attachments: MP Report #1.pdf

Importance: High

Gentlemen:

Attached is Phase 1 Report for the Master Plan. This includes history, inventory of existing facilities, and forecasts. Please review and provide comment by **Feb 12, 2015**. I have included a synopsis of the goals and objectives as well as SWOT analysis in the body of the document. If you feel the SWOT analysis should be pulled out and placed in an Appendix I can do that. I would like your opinion on the forecasts. Various methodologies were examined.

I am available to address questions.

Next steps:

(1) Revise Phase 1 based on comments, and send to FAA for approval of forecasts.
(2) Start documentation of facility requirements section
(3) Once I have that information I would like to have a working meeting to discuss facilities and how best to address them

Lisa M. Cheung, LEED Green Associate
Airport Planner

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AGENDA

Airport Master Plan Update

Technical Advisory Committee Meeting #2

August 13, 2015

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1. Review Forecasts
2. Facility Requirements
    - Airside
    - Landside
    - Obstructions
3. Alternatives
4. Environmental
5. Next Steps
6. Questions/Comments
    a. Provide comments by September 15, 2015

NOTES:

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MEETING MINUTES

PURPOSE: Chautauqua County/Dunkirk Airport (DKK) Master Plan Update

ATTENDEES: Bill Tucker, Carl Bjurlin, Lou Nalbone, Mary Kay Genthner, Lisa Cheung

DATE: August 13, 2015

LOCATION: Chautauqua County Dunkirk Airport (DKK)

Meeting with TAC members to discuss the second phase of the Airport Master Plan Update, including findings of the facilities requirements, alternative development plans and environmental overview.

The original phase 1 report was sent to the FAA in February 2015, and was resent as a revision in early August to include the FAA requested comparison tables for the forecasts. The forecasts have yet to be approved by the FAA. Once approval of forecasts is received further action on the alternatives and choice of preferred development for the ALP will be undertaken.

The facilities requirements are summarized at the end of Chapter 4 of the Master Plan Update, divided into airside and landside. The key findings for airside include: no foreseeable changes to runway length; inclusion of an approach lighting system to Runway 24, and carefully explained that it is not FAA eligible. Taxiway widths were identified as exceeding the design criteria. Further study may be required when the taxiways need to be rehabilitated to determine the width for the rehabilitation versus the costs of relocating lights if made narrower. No additional taxiways were identified. Pavement conditions were reviewed and will future work will be included in the development phase section of the report

The landside improvements consist of additional hangar facilities. There was further discussion about the size and location of the hangars. **Action item**: Consider a larger hangar than 80x80, and place more to accommodate the transient overnights. Various support equipment was reviewed. There is mention to replace a brush hog, but airport management mentioned the need for replacement of a blower in the short-term to replace aged equipment. **Action item**: add this additional equipment to the report.

Obstructions discussion centered on clearing the visual 20:1 obstructions that affect the runway thresholds, and limit night instrument operations. Carl and Lisa took a ride to the Runway 15 end after the meeting to determine which obstruction may be an issue.

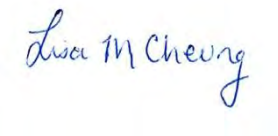
The alternatives were reviewed: namely to either remove the obstructions and not touch the threshold locations or displace the thresholds for the obstructions. **Action item**: TAC members will review the alternatives and provide feedback.

The report includes a brief environmental overview for the airport, along with some of the ALP plan set, excluding the ALP sheet.

Next steps:

- TAC members to provide feedback on this report by September 15
- Passero to contact FAA to obtain approval letter for forecasts
- Passero will incorporate TAC members feedback into a revised report to circulation to the FAA/NYSDOT
- Passero to continue work on the financial section of the Master Plan
- Passero to continue work on the ALP set of plans

Submitted by,



Lisa Cheung, LEED Green Associate
Airport Planner

Attachments

cc: Attendees
Maru Kay Genthner, Passero Associates

Lisa Cheung

From: David.Carlin@faa.gov
Sent: Tuesday, January 05, 2016 9:40 PM
To: Lisa Cheung
Cc: tuckerb@co.chautauqua.ny.us
Subject: Dunkirk Forecast Approval

Lisa,

I have reviewed the Aviation Activity Forecasts for the Airport Master Plan update currently underway for Dunkirk Airport (DKK).

Pursuant to this review, I find your forecasting methodology acceptable and subsequent conclusions reasonable. Therefore, I am approving the Aviation Activity Forecasts for Dunkirk.

Should you have any questions or wish to discuss this matter in further detail, please do not hesitate to contact me.

Dave

David Carlin, MPA
Community Planner
Federal Aviation Administration - NYADO
1 Aviation Plaza, Suite 111
Jamaica, NY 11434
Phone: (718) 995-5762
Email: david.carlin@faa.gov

AGENDA

Airport Master Plan Update

Technical Advisory Committee Meeting #2

August 13, 2015

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1. Review Forecasts
2. Facility Requirements
    - Airside
    - Landside
    - Obstructions
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NOTES:

PASSERO ASSOCIATES
engineering architecture

MEETING MINUTES

PURPOSE: Chautauqua County/Dunkirk Airport (DKK) Master Plan Update

ATTENDEES: Bill Tucker, Carl Bjurlin, Lou Nalbone, Mary Kay Genthner, Lisa Cheung

DATE: August 13, 2015

LOCATION: Chautauqua County Dunkirk Airport (DKK)

Meeting with TAC members to discuss the second phase of the Airport Master Plan Update, including findings of the facilities requirements, alternative development plans and environmental overview.

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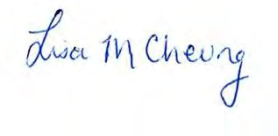
Submitted by,



Lisa Cheung, LEED Green Associate
Airport Planner

Attachments

cc: Attendees
Maru Kay Genthner, Passero Associates

PASSERO ASSOCIATES
engineering architecture

MEETING MINUTES

PURPOSE: Approaches at Chautauqua County/Dunkirk Airport (DKK)

ATTENDEES: Bill Tucker, Carl Bjurlin, Mary Kay Genthner, Lisa Cheung

DATE: June 18, 2015

LOCATION: Chautauqua County Dunkirk Airport (DKK)

Meeting with Bill Tucker to discuss what it takes to get night approaches back at Chautauqua County/Dunkirk Airport, and to evaluate steps necessary to get PAPI back in service on Runways 15, 33 and 6.

In March 2015 the FAA submitted a NOTAM that night approaches would not be available on each of the runway ends. In April 2015 the new approach plates were published with this restriction. Similarly the FAA has performed numerous flight checks of the PAPI for each runway end, and has passed Runway 24, but published a NOTAM that Runway 6, 15 and 33 to be "out of service" until September, when the next flight check is scheduled. The restrictions to night approaches and PAPI usage result from obstructions to applicable surfaces. An obstruction removal project that was undertaken from fall 2014 – to spring 2015 remains open, with a potential of approximately $38,000 available to address some of the remaining obstruction issues.

Night Approaches

To have nigh approaches the 20:1 slope (also referred to as the Runway End Siting Surface) must be clear. Means to mitigate 20:1 penetrations includes: removing, lowering, marking, or lighting. When removing obstructions the FAA recommends removing high obstructions within a 50' radius of the critical obstruction. When these options are not feasible, and if there is a usable PAPI, then apply for PAPI mitigation. This however is reviewed on a case by case basis, for consideration and approval by the FAA. When all else fails displace threshold to avoid critical obstructions.

The FAA has provided their data that identifies obstructions to the 20:1 for Runway 15 and 33. They do not have data for Runway 6 and 24, and as such must assume the 20:1 is not clear, unless the Airport Sponsor can prove otherwise. Runway 6 and 24 data is being submitted to the FAA as part of the ongoing Master Plan,

Runway 15 and 33

FAA provided their data for Runway 15 and 33. Based on FAA data we were able to verify that their Runway 15 obstructions were removed as part of the obstruction removal process. On June 12, 2015 the points were removed from the FAA database making the Runway 15 20:1 slope clear. As a result the night limitations will be lifted with the approach chart publication date of 8/20/15. There are three obstructions listed in the FAA database that are restricting night approaches to Runway 33:

Runway 33

Landowner	Address	SBL#	Easement	FAA ID/PA #	Latitude	Longitude
Paluch, Edward	11190 Newell Rd	81.00-1-54	N	1191196 (K0144)/#74	N42 29' 10.19"	W79 15' 53.41"
Link, Edward	11290 Newell Rd	81.00-1-33	Y: portion	1191182 (K0131)/#49	N42 29' 13.68"	W79 15' 55.81"
Miller, Brett	11161 Newell Rd	81.00-1-53	N	1191220 (K0152)/#62	N42 29' 6.02"	W79 15'56.04"

The first two obstructions are group of trees, while the last one is an individual tree. Removal of these obstructions would lift the night approaches to Runway 33.

Future obstructions:

There appears to be future obstructions (group of trees, one on each runway end) that aren't currently in the FAA database that may cause an issue in the future.

Landowner	Address	SBL#	Easement	FAA ID/PA #	Latitude	Longitude
Tarnowski, Bruce	11161 Newell Rd	80.00-3-31	Y	PA #51 (Rwy 33)	N42 29' 9.38"	W79 15' 57.70"
Railroad		63.00-2-45	N	PA #39 (Rwy 15)	N42 29' 53.51'	W79 16' 51.48"

Runway 6-24

The FAA does not have data for this runway. Analysis for this runway is based on the recently flown aerial mapping for the Airport Master Plan. As there is no mapping the FAA assumes there are 20:1 obstructions and therefore limited night operations. If we can provide a letter that the 20:1 slope is clear of obstructions then FAA Flight Procedures branch can lift the night restrictions.

However, based on the new mapping, there are obstructions to the 20:1 for both runways, so we are unable to submit such a letter to the FAA. The FAA will have this mapping in the near future.

Analysis for the 20:1 for either runway end yields the following:

Runway 6

Landowner	Address	SBL#	Easement	Passero #	Latitude	Longitude
Wallace, Gerald	3432 Middle Rd	80.00-3-67.2	N	#1	N42 29' 12.89"	W79 16' 46.92"
Wallace, Gerald	3432 Middle Rd	80.00-3-67.2	Y: Portion	#3	N42 39' 12.71"	W79 16' 51.27"
Wallace, Gerald	3432 Middle Rd	80.00-3-56	N	#4	N42 29' 13.11"	W79 16' 54.8"

Runway 24

Landowner	Address	SBL#	Easement	Passero #	Latitude	Longitude
Chautauqua County	Airport	-	-	12: Fence	N42 29' 59.78"	W79 15' 35.98"
Chautauqua County	Airport	-	-	14: Tree	N42 30' 05.35"	W79 15' 40.53"
Cain, Richard	2995 Middle Rd	64.00-3-15	N	15	N42 30' 02.89"	W79 15' 26.90"
Chautauqua County	Airport	-	-	16: Tree Group	N42 30' 05.40"	W79 15' 34.76"
Covert, Timothy	3027 Middle Rd	64.00-3-12	Y	17	N42 30' 05.98"	W79 15'32.87"
Cain, Richard	2995 Middle Rd	64.00-3-15	N	18	N42 30' 05.11"	W79 15' 28.40"
Cain, Richard	2995 Middle Rd	64.00-3-15	N	20	N42 30' 07.33"	W79 15' 28.21"
Covert, Timothy	3027 Middle Rd	64.00-3-12	Y	26	N42 30' 08.29"	W79 15'33.24"

Recommendations for night approaches:

Runway	***Recommendation***
Runway 15	Obstruction removal sent to FAA and removed from their database on June 12, 2015. Night approach limitations will be lifted with the 8/20/15 instrument approach chart.
Runway 33	Passero to pursue discussions with landowners for removal of trees, and determine estimated cost.
Runway 6	Passero to pursue discussions with the landowners for removal of trees, and determine costs.
Runway 24	Passero to pursue discussions with adjacent property owner to remove trees at the rear of property. Remove on airport tree group and notify flight procedures. Apply for PAPI mitigation for Runway 24 (further information will be forthcoming)

PAPI

During the most recent flight check in March 2015 the FAA took the PAPI for Runway 6, 15 and 33 out of service. The next flight check is scheduled for September 2015. Discussions with FAA personnel from flight check indicated that trees 0.3 NM from each runway were the reason for taking the PAPI out of service. The following analysis is based on newly acquired mapping against the PAPI Obstacle Clearance Surface (OCS), which is different than the 20:1 surface, to determine where the problem obstructions may be located. To get the PAPI back in service the PAPI OCS must be clear and pass flight check.

Runway 15

FAA data indicated that Runway 15 PAPI OCS is clear, but flight check indicated there is a tree about 0.3 NM from the airport that placed the PAPI out of service. Without specific data the following are points from our current mapping that could be the issue.

Landowner	Address	SBL#	Easement	PA #	Latitude	Longitude
Crowell, Lonnie	3420 Werle Rd	63.00-1-36	N	#41	N42 29' 57.19"	W79 16' 55.96"
Salisbury, Barbara	3352 Werle Rd	63.00-2-44.1	N	#43	N42 30' 00.48"	W79 16' 53.13"
Salisbury, Barbara	3352 Werle Rd	63.00-2-44.1	N	#43	N42 29' 59.54"	W79 16' 49.77"
Harrington, Robert Sr	11537 Harrington	63.00-1-34	N	#44	N42 29' 58.76"	W79 16' 57.22"
Harrington, Robert Jr	11543 Harrington	63.00-1-3.2	N	#44	N42 30' 00.67"	W79 16' 59.20"
Harrington, Robert Jr	11543 Harrington	63.00-1-3.2	N	#45	N42 30' 04.02"	W79 16' 56.70"
Harrington, Robert Sr	11537 Harrington	63.00-1-34	N	#46	N42 30' 02.29"	W79 17' 00.24"
Harrington, Robert Jr	11543 Harrington	63.00-1-3.2	N	#47	N42 30 03.53"	W79 17' 00.54"
Dorman, Kenneth	11589 Harrington	63.00-1-26	N	#48	N42 30' 06.83"	W79 17' 00.92"
Dorman, Cathy	11539 Harrington	63.00-1-30	N	N/A	N42 30' 05.09"	W79 16' 58.92"

Runway 33

Landowner	Address	SBL#	Easement	FAA ID/PA #	Latitude	Longitude
Paluch, Edward	11190 Newell Rd	81.00-1-54	N	1191196 (K0144)/#74	N42 29' 10.19"	W79 15' 53.41"
Link, Edward	11290 Newell Rd	81.00-1-33	Y: Portion	1191182 (K0131)/#49	N42 29' 13.68"	W79 15' 55.81"

Runway 24 cleared the PAPI flight check, but we have identified trees that may cause a problem in the future.

Landowner	Address	SBL#	Easement	Passero #	Latitude	Longitude
Paoletta, Michael	3008 Middle Rd	64.00-1-52.1	Y	15	N42 30' 03.61"	W79 15' 26.90"
Cain, Richard	2995 Middle Rd	64.00-3-15	N	15	N42 30' 02.89"	W79 15' 26.90"
Covert, Timothy	3027 Middle Rd	64.00-3-12	Y	17	N42 30' 05.98"	W79 15'32.87"
Cain, Richard	2995 Middle Rd	64.00-3-15	N	18	N42 30' 05.11"	W79 15' 28.40"
Cain, Richard	2995 Middle Rd	64.00-3-15	N	20	N42 30' 07.33"	W79 15' 28.21"
Covert, Timothy	3027 Middle Rd	64.00-3-12	Y	26	N42 30' 08.29"	W79 15'33.24"
Cain, Richard	2995 Middle Rd	64.00-3-15	N	28	N 42 30'10.43"	W79 15'28.51"
Paoletta, Michael	3008 Middle Rd	64.00-1-52.1	Y	29	N42 30' 10.94"	W79 15' 29.69"
Halas, Patrick	3020 Middle Rd	64.00-1-.37	N	33	N42 30' 11.22"	W 79 15'28.39"
Covert, Timothy	2910 Middle Rd	64.00-1-31.1	N	37	N42 30' 13.00	W 79 15'12.65"
Turk, Robert	Middle Rd	64.00-1-35.1	N	38	N42 30' 19.33"	W 79 15'12.26"

Runway 6

Obstructions #3 and #4 are identical to the 20:1 obstructions

Landowner	Address	SBL#	Easement	Passero #	Latitude	Longitude
Wallace, Gerald	3432 Middle Rd	80.00-3-67.2	N	#2	N42 29' 13.07"	W79 16' 49.95"
Wallace, Gerald	3432 Middle Rd	80.00-3-67.2	Y: Portion	#3	N42 39' 12.71"	W79 16' 51.27"
Wallace, Gerald	3432 Middle Rd	80.00-3-56	N	#4	N42 29' 13.11"	W79 16' 54.8"

Recommendations for PAPI:

Runway	***Recommendation***
Runway 15	See if Dunkirk Aviation can fly the approach to determine which tree may be the single issue. Passero to discuss with landowner once tree is identified.
Runway 33	Passero to pursue discussions with the landowners for removal of trees and determine costs.
Runway 6	These obstruction locations are similar to the 20:1 obstructions. Passero to pursue discussions with the landowners for removal of trees, and determine costs.
Runway 24	These obstruction locations are similar to the 20:1 obstructions. Passero to pursue discussions with adjacent property owners (Paolettta, Covert and Cain) to remove trees (#15, 17, 18, 20, 26, 28)

Future actions:

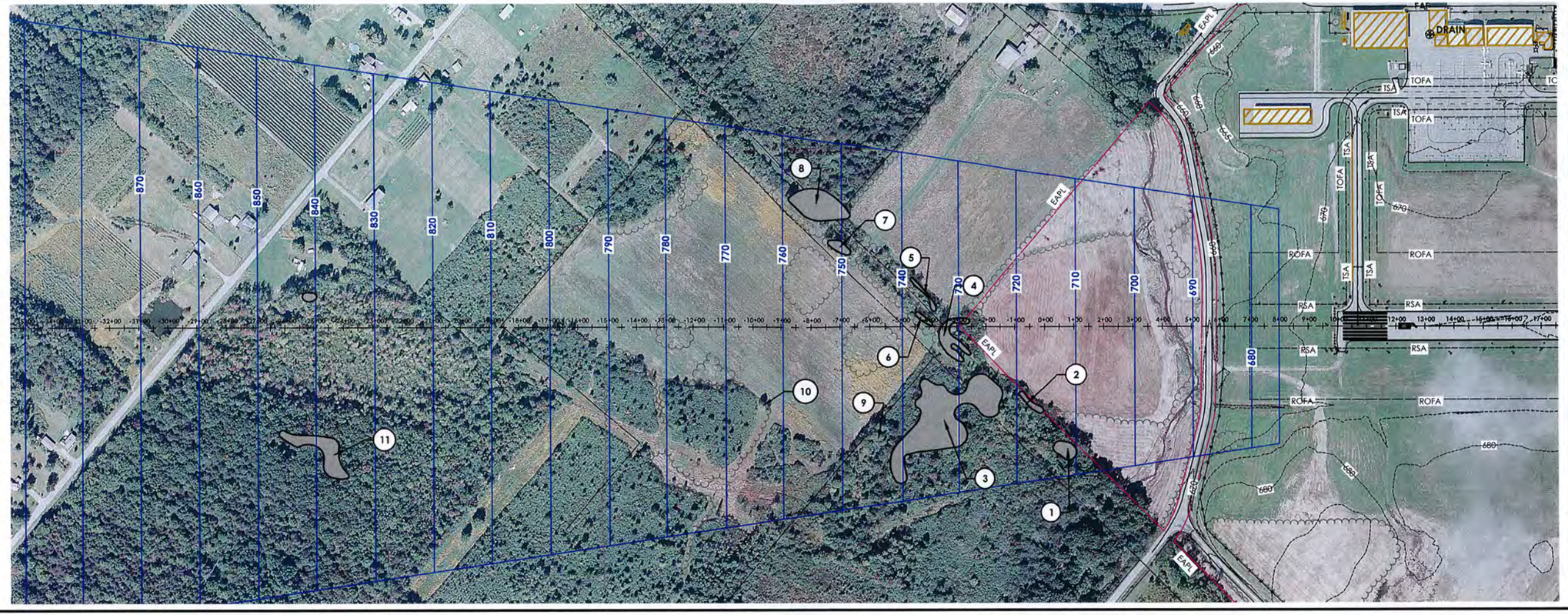
- Passero will commence discussions with property owners to determine their willingness, and cost to remove critical trees
- Passero will confer with Bill Tucker regarding landowner willingness, for his consideration and prioritization of projects within the budget
- Passero will prepare a PAPI mitigation for Runway 24 to petition use of PAPI to mitigate the 20:1 night approach restriction

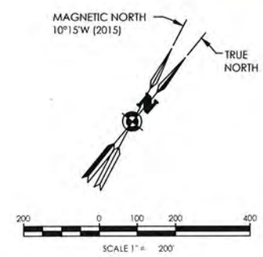
Submitted by,

Lisa Cheung, LEED Green Associate
Airport Planner

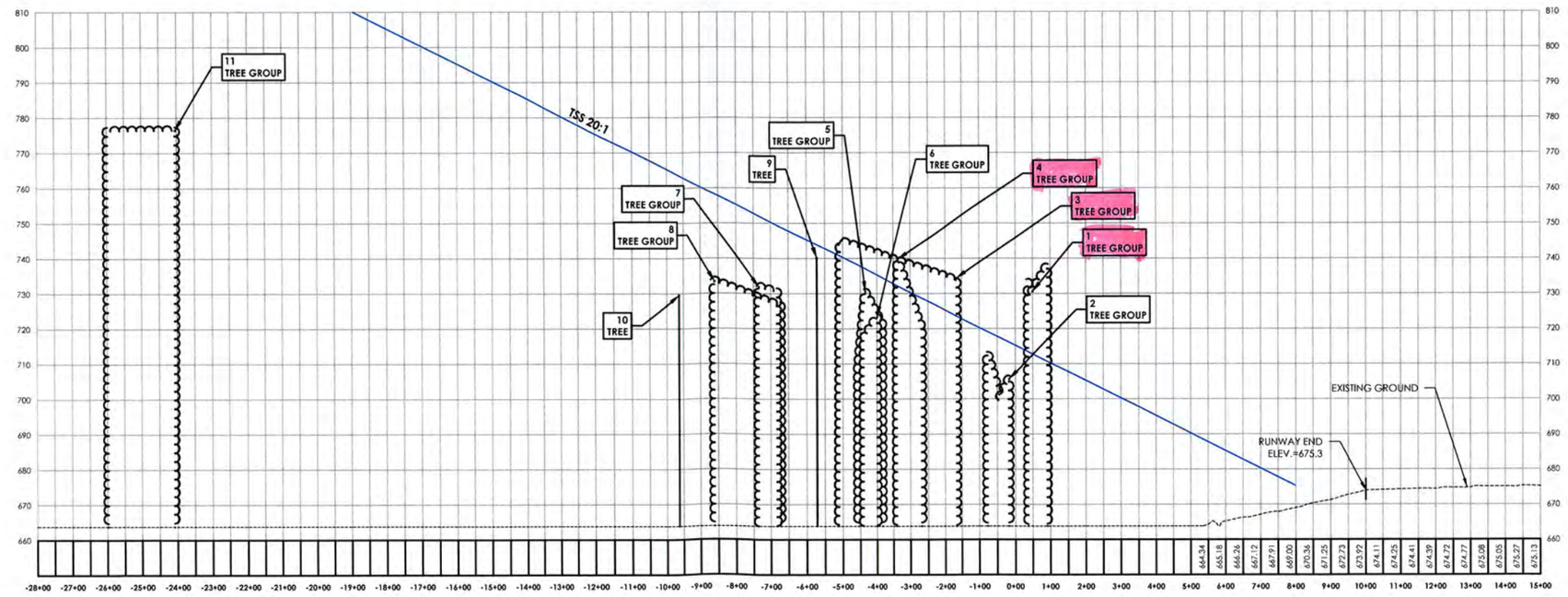
Attachments

cc: Attendees
Shawn Bray, Passero Associates





ID	DESCRIPTION	OBJECT ELEV	PART 77 SURFACE HEIGHT	PART 77 PENETRATION	DISPOSITION	TSS SURFACE HEIGHT	TSS PENETRATION
1	TREE GROUP	737.6	696.2	41.4	REMOVE OR LIGHT	711.0	26.6
2	TREE GROUP	712.7	700.5	12.2	REMOVE OR LIGHT	718.0	
3	TREE GROUP	744.9	703.5	41.4	REMOVE OR LIGHT	722.0	22.9
4	TREE GROUP	739.7	708.2	31.5	REMOVE OR LIGHT	731.0	8.7
5	TREE GROUP	730.5	711.5	19.0	REMOVE OR LIGHT	736.0	
6	TREE GROUP	723.4	710.3	13.1	REMOVE OR LIGHT	737.0	
7	TREE GROUP	731.9	719.8	12.1	REMOVE OR LIGHT	750.0	
8	TREE GROUP	733.4	723.3	10.1	REMOVE OR LIGHT	755.0	
9	TREE	740.1	715.1	25.0	REMOVE OR LIGHT	745.0	
10	TREE	729.5	726.5	3.0	REMOVE OR LIGHT	763.0	
11	TREE GROUP	777.7	768.2	9.5	REMOVE OR LIGHT	837.0	



RUNWAY 6 APPROACH
SCALE: HORIZONTAL - 1" = 200'
VERTICAL - 1: = 20'

PASSERO ASSOCIAT
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Stamp:

Client:
Chautauqua County
454 North Work Street
Falconner, New York 14733

Passero Associate
242 W. Main Street (585) 325
Rochester, NY 14614 Fax: (585) 325
Principal-in-Charge Wayne F.Wegman, I
Project Manager Lisa Che
Designed by Wayne B. Z

Revisions

No.	Date	By	Description

Inner Approach Plan and Profile Runway 6

Master Plan Update

Chautauqua County
Dunkirk Airport
Town/City: Sheridan
County: Chautauqua State: New Y

Project No. 95019.46

Drawing No. Fig. 6-6

Date May 2015

MAGNETIC NORTH
10°15'W (2015)

TRUE NORTH

200 0 100 200 400

SCALE 1" = 200'

Z:\1995\95019\95000019.0046\Drawings\Airport\Blocks\95019.46 RUNWAY 6-24 papi.dwg, 6/16/2015 2:54:32 PM, wzian

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Project Manager Lisa Cheung
Designed by Wayne B. Zian

Revisions

No.	Date	By	Description

PAPI Approach Plan and Profile Runway 6

Master Plan Update

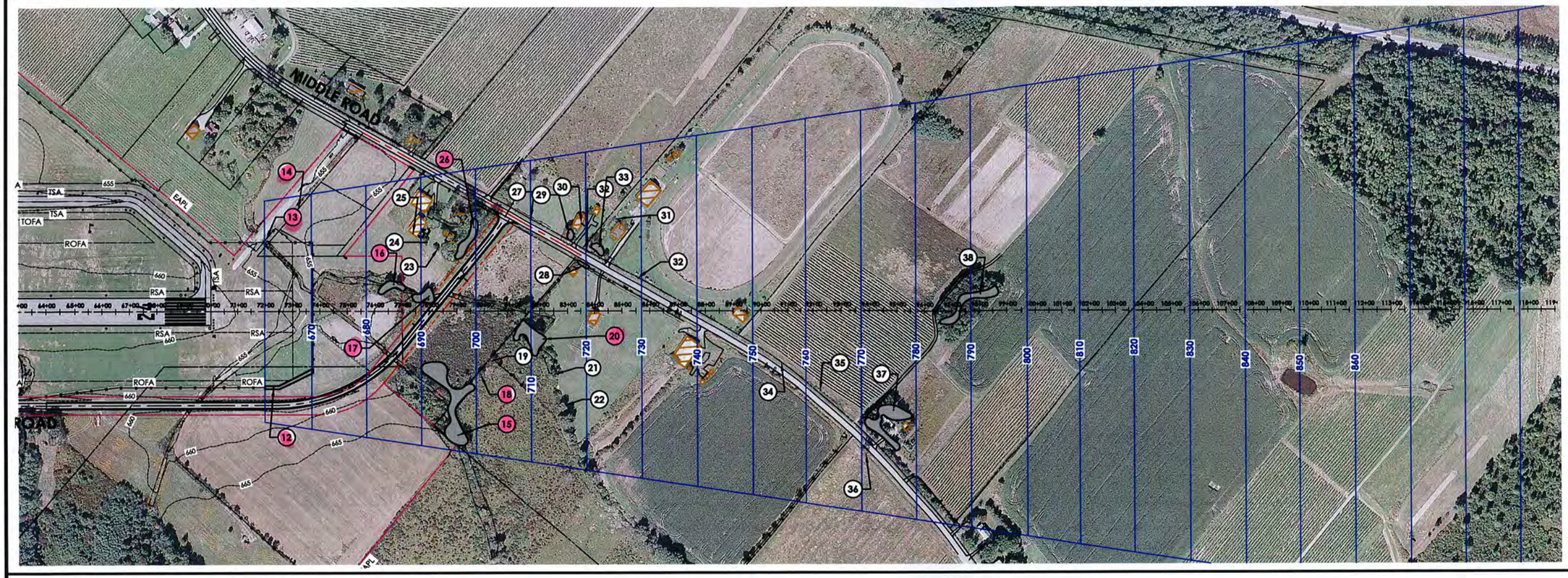
Chautauqua County
Dunkirk Airport

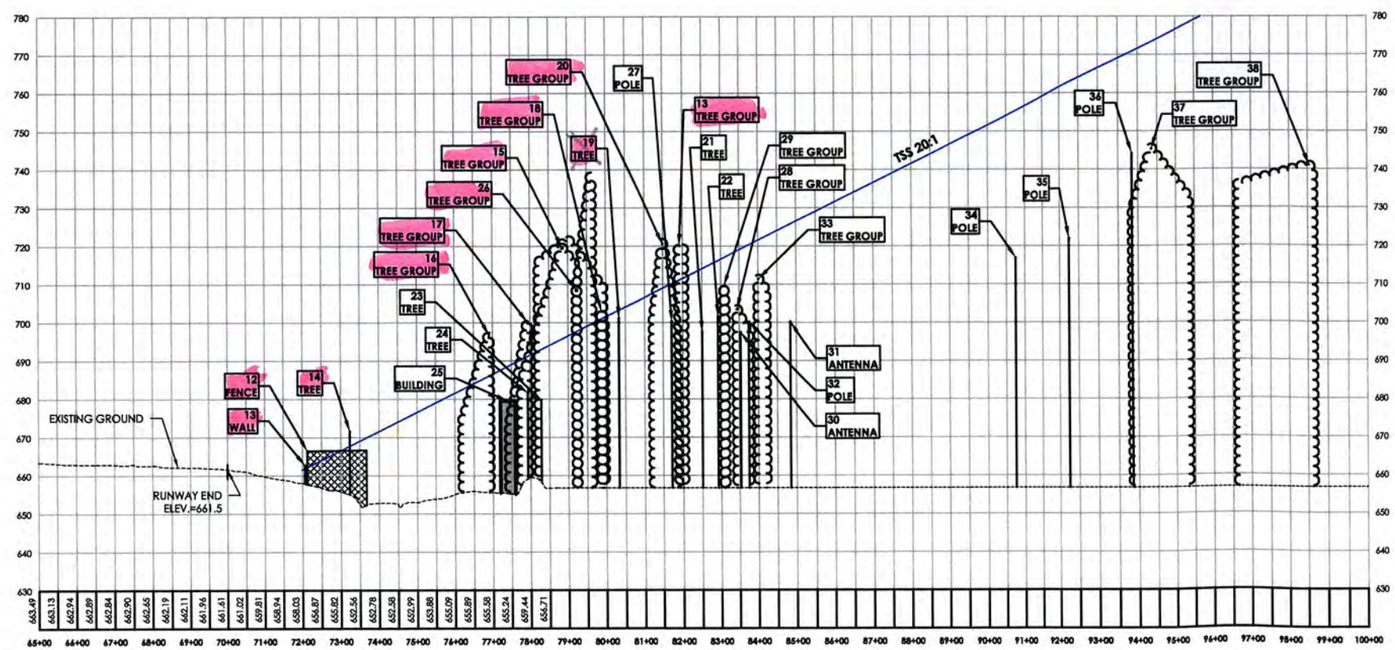
Town/City: Sheridan
County: Chautauqua State: New York

Project No.
95019.46

Drawing No.
-

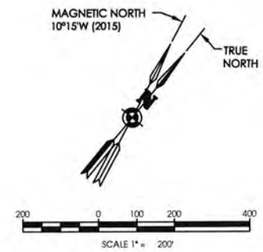
Date
May 2015





RUNWAY 24 APPROACH

SCALE: HORIZONTAL - 1" = 200'
VERTICAL - 1: = 20'



ID	DESCRIPTION	OBJECT ELEV.	PART 77 SURFACE HEIGHT	PART 77 PENETRATION	DISPOSITION	TSS SURFACE HEIGHT	TSS PENETRATION
12	FENCE	666.8	661.6	5.2	MARK/LIGHT	666.6	5.2
13	WALL	662.8	662.0	0.8	LIGHT	662.0	0.8
14	TREE	671.6	665.1	6.5	REMOVE	667.0	3.5
15	TREE GROUP	719.6	681.9	37.7	REMOVE OR LIGHT	695.0	24.5
16	TREE GROUP	696.7	675.9	20.8	REMOVE	686.0	9.3
17	TREE GROUP	700.2	679.0	21.2	REMOVE OR LIGHT	691.0	8.8
18	TREE GROUP	702.9	684.8	18.8	REMOVE OR LIGHT	701.0	1.9
19	TREE	701.2	686.0	15.2	REMOVE	702.0	
20	TREE GROUP	720.6	689.3	31.3	REMOVE	708.0	11.4
21	TREE	697.5	692.4	5.1	REMOVE	713.0	
22	TREE GROUP	701.8	693.6	8.2	REMOVE	718.0	
23	TREE	679.9	679.8	0.1	REMOVE	693.0	
24	TREE	681.6	678.9	2.7	REMOVE	691.0	
25	BUILDING	679.6	676.9	2.7	LIGHT	687.0	
26	TREE GROUP	728.0	683.6	44.4	REMOVE	699.0	29.0
27	POLE	700.3	690.1	10.2	LIGHT	710.0	
28	TREE GROUP	703.5	695.1	8.5	REMOVE	719.0	
29	TREE GROUP	710.9	694.1	16.8	REMOVE	716.0	
30	ANTENNA	697.5	695.4	2.1	LIGHT	719.0	
31	ANTENNA	700.2	699.3	0.9	LIGHT	726.0	
32	POLE	701.9	696.1	5.8	LIGHT	720.0	
33	TREE GROUP	711.4	696.9	14.3	REMOVE	721.0	
34	POLE	716.9	716.6	0.3	LIGHT	757.0	
35	POLE	722.0	721.1	0.9	LIGHT	762.0	
36	POLE	744.1	725.7	18.4	LIGHT	770.0	
37	TREE GROUP	749.8	727.5	22.3	REMOVE	772.0	
38	TREE GROUP	741.1	739.5	1.6	REMOVE	794.0	

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Principal-in-Charge Wayne F.Wegman, P.E.
Project Manager Lisa Cheung
Designed by Wayne B. Zlan

Revisions

No.	Date	By	Description

Inner Approach Plan and Profile Runway 24

Master Plan Update

Chautauqua County Dunkirk Airport

Town/City: Sheridan
County: Chautauqua State: New York

Project No. 95019.46

Drawing No. Fig. 6-7

Date May 2015

MAGNETIC NORTH
10°15'W (2015)

TRUE NORTH

200 0 100 200 400

SCALE 1" = 200'

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Principal-in-Charge	Wayne F.Wegman, P.E.
Project Manager	Lisa Cheung
Designed by	Wayne B. Zian

Revisions

No.	Date	By	Description

PAPI Approach Plan and Profile Runway 24

Master Plan Update

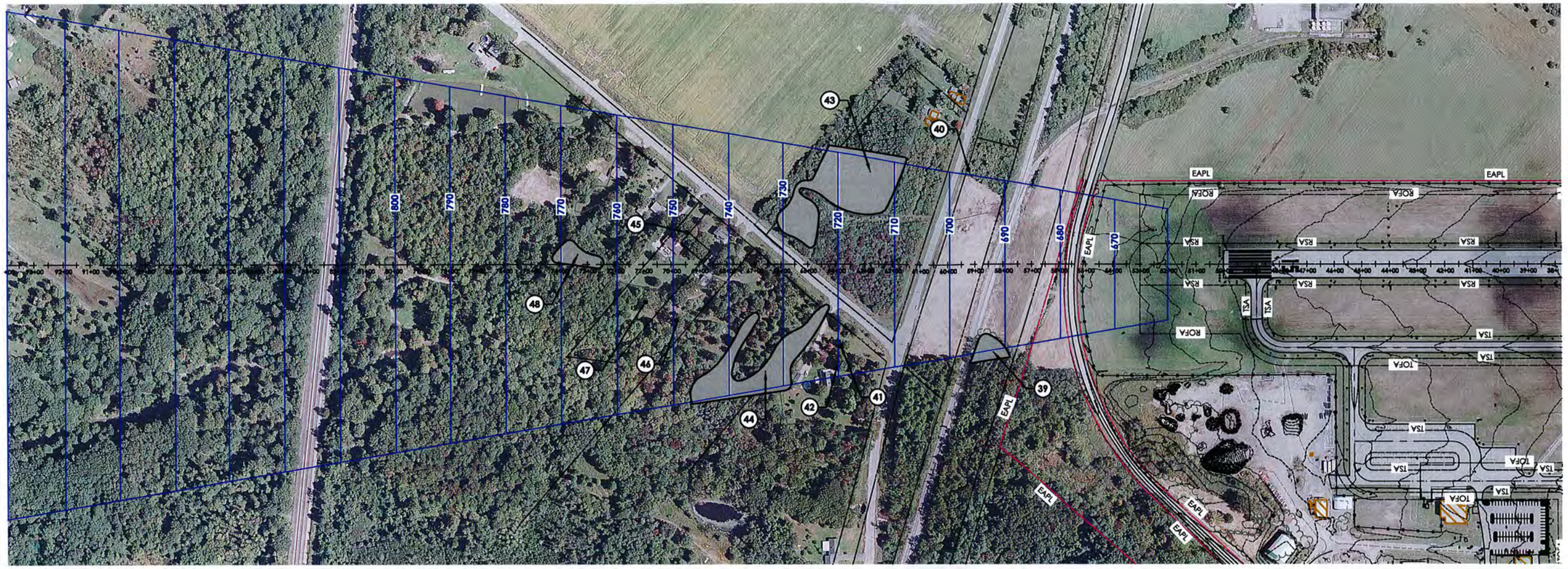
Chautauqua County
Dunkirk Airport

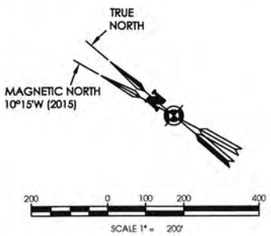
Town/City: Sheridan
County: Chautauqua State: New York

Project No.
95019.46

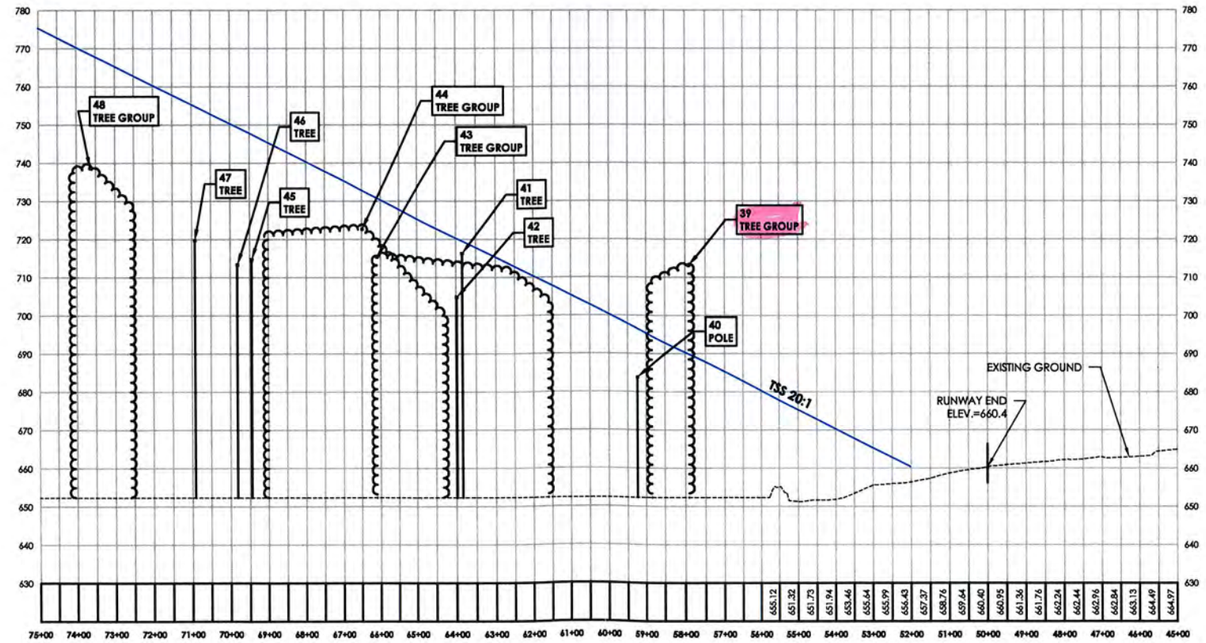
Drawing No.
-

Date
May 2015





ID	DESCRIPTION	OBJECT ELEV.	GQS SURFACE HEIGHT	GQS PENETRATION	DISPOSITION	TSS SURFACE HEIGHT	TSS PENETRATION
39	TREE GROUP	713.2	677.9	35.3	REMOVE OR LIGHT	694.7	13.5
40	POLE	683.8	681.7	2.1	SPHERE ON LINE		
41	TREE	716.4	695.2	21.2	REMOVE OR LIGHT		
42	TREE	704.9	695.6	9.3	REMOVE OR LIGHT		
43	TREE GROUP	712.8	692.4	20.4	REMOVE OR LIGHT		
44	TREE GROUP	722.7	703.1	19.6	REMOVE OR LIGHT		
45	TREE	714.8	711.7	3.1	REMOVE OR LIGHT		
46	TREE	713.4	712.8	0.6	REMOVE OR LIGHT		
47	TREE	719.7	716.1	3.6	REMOVE OR LIGHT		
48	TREE GROUP	736.7	723.9	14.8	REMOVE OR LIGHT		



RUNWAY 15 APPROACH
SCALE: HORIZONTAL - 1" = 200'
VERTICAL - 1: = 20'

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Project Manager Lisa Cheung
Designed by Wayne B. Zian

Revisions

No.	Date	By	Description

Inner Approach Plan and Profile Runway 15

Master Plan Update

Chautauqua County Dunkirk Airport
Town/City: Sheridan
County: Chautauqua State: New York

Project No. 95019.46

Drawing No. Fig. 6-8

Date May 2015

TRUE NORTH

MAGNETIC NORTH 10°15'W (2015)

200 0 100 200 400

SCALE 1" = 200'

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Project Manager: Lisa Cheung
Designed by: Wayne B. Zian

Revisions

No.	Date	By	Description

PAPI Approach Plan and Profile Runway 15

Master Plan Update

Chautauqua County Dunkirk Airport

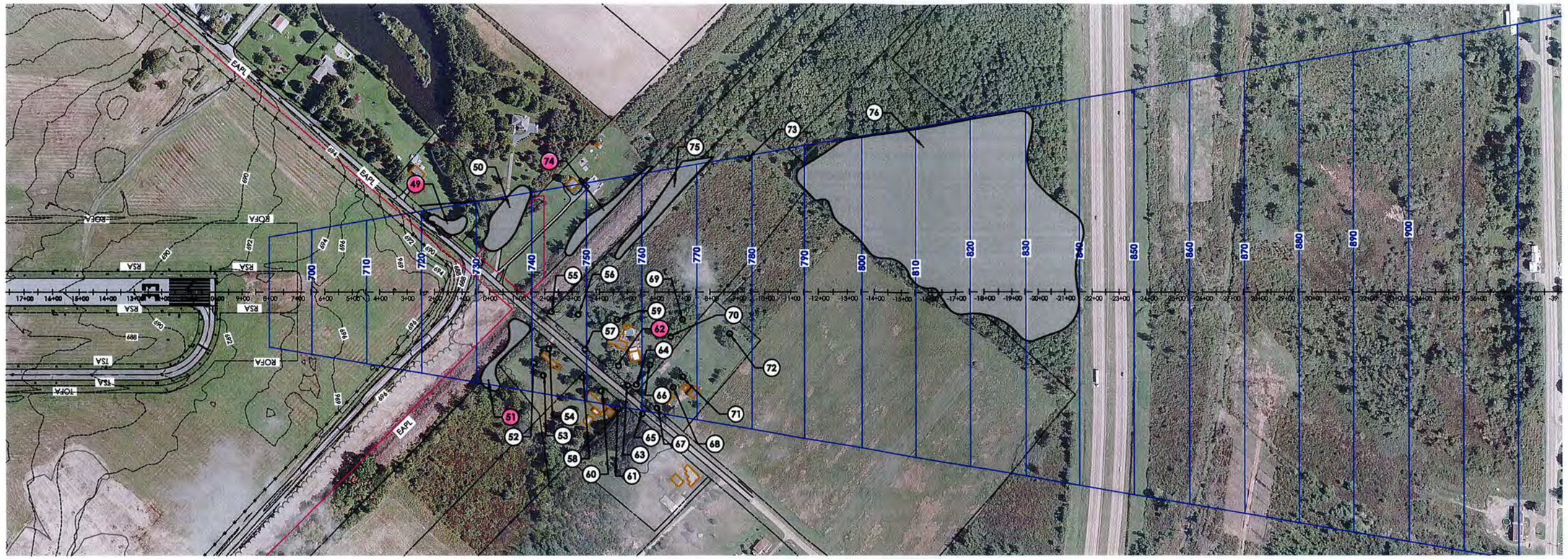
Town/City: Sheridan
County: Chautauqua State: New York

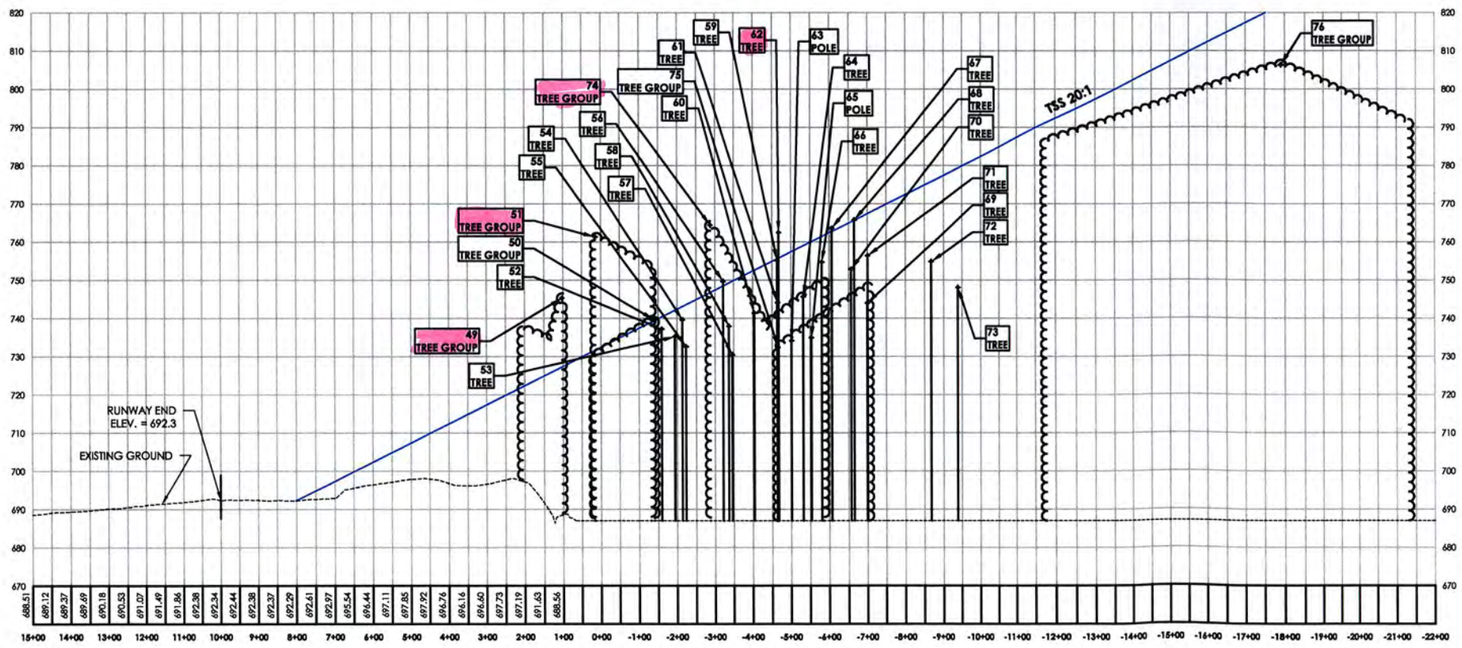
Project No.
95019.46

Drawing No.
-

Date
May 2015

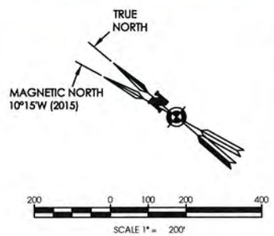
Z:\1995\9501995019500019.0046\Drawings\Airport\Blocks\95019 46 RUNWAY 15-33 APPROACH PAPI.dwg, 7/2/2015 2:22:44 PM, BSAVAGE





RUNWAY 33 APPROACH

SCALE: HORIZONTAL - 1" = 200'
VERTICAL - 1: = 20'



ID	DESCRIPTION	OBJECT ELEV.	GQS SURFACE HEIGHT	GQS PENETRATION	DISPOSITION	TSS SURFACE HEIGHT	TSS PENETRATION
49	TREE GROUP	745.3	712.7	32.6	REMOVE OR LIGHT	727.2	27.1
50	TREE GROUP	739.5	720.1	19.5	REMOVE OR LIGHT		
51	TREE GROUP	761.3	715.4	45.9	REMOVE OR LIGHT	731.6	29.7
52	TREE	737.2	720.5	16.7	REMOVE OR LIGHT		
53	TREE	735.2	721.5	13.7	REMOVE OR LIGHT		
54	TREE	739.6	722.1	17.5	REMOVE OR LIGHT		
55	TREE	732.6	722.4	10.2	REMOVE OR LIGHT		
56	TREE	749.7	725.3	24.4	REMOVE OR LIGHT		
57	TREE	730.5	726.1	4.4	REMOVE OR LIGHT		
58	TREE	737.9	725.8	12.1	REMOVE OR LIGHT		
59	TREE	756.1	729.5	25.6	REMOVE OR LIGHT		
60	TREE	741.4	729.4	12.0	REMOVE OR LIGHT		
61	TREE	744.1	729.5	14.6	REMOVE OR LIGHT		
62	TREE	762.5	729.6	32.9	REMOVE OR LIGHT	756.7	6.8
63	POLE	734.1	730.6	3.5	LIGHT		
64	TREE	745.6	731.5	14.1	REMOVE OR LIGHT		
65	POLE	734.9	732.1	2.8	LIGHT		
66	TREE	754.7	732.9	21.8	REMOVE OR LIGHT		
67	TREE	763.6	733.7	29.9	REMOVE OR LIGHT	762.6	1
68	TREE	765.7	735.4	30.3	REMOVE OR LIGHT	765.6	0.1
69	TREE	744.0	736.4	7.6	REMOVE OR LIGHT		
70	TREE	752.8	735.1	17.7	REMOVE OR LIGHT		
71	TREE	756.4	736.4	20.0	REMOVE OR LIGHT		
72	TREE	754.9	741.3	13.6	REMOVE OR LIGHT		
73	TREE	748.1	743.4	4.7	REMOVE OR LIGHT		
74	TREE GROUP	764.4	724.4	40.0	REMOVE OR LIGHT	748.6	1.6
75	TREE GROUP	743.2	736.6	11.6	REMOVE OR LIGHT		
76	TREE GROUP	806.3	768.5	37.8	REMOVE OR LIGHT		

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Principal-in-Charge	Wayne F.Wegman, P.E.
Project Manager	Lisa Cheung
Designed by	Wayne B. Zian

Revisions

No.	Date	By	Description

Inner Approach Plan and Profile Runway 33

Master Plan Update

Chautauqua County Dunkirk Airport
Town/City: Sheridan
County: Chautauqua State: New York

Project No.
95019.46

Drawing No.
Fig. 6-9

Date
May 2015

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Fax: (585) 325-1691

Principal-in-Charge: Wayne F.Wegman, P.E.
Project Manager: Lisa Cheung
Designed by: Wayne B. Zian

Revisions

No.	Date	By	Description
			PAPI

~~Inner Approach Plan and Profile~~
Runway 33

Master Plan Update

Chautauqua County Dunkirk Airport

Town/City: Sheridan
County: Chautauqua State: New York

Project No.
95019.46

Drawing No.
Fig. 6-9

Date
May 2015

20:1 ~~in addition~~ to slope

According to FAA penetrates ois

Z:\1995\95019\95000019.0046\Drawings\Airport\Blocks\95019 46 RUNWAY 15-33 APPROACH PAPI.dwg, 6/17/2015 8:52:23 AM, wzian

Appendix B

Based Aircraft Inventory

Airport Details Report

☑ Condensed Header

Aircraft List: ☐ Only Commented Tail Numbers ☐ Only Duplicates ☐ All Others

Federal Aviation Administration

National Based Aircraft Inventory Program

CHAUTAUQUA COUNTY/DUNKIRK

DUNKIRK, NY

Loc ID: DKK **Site Number: 15157.*A** **S/L: GA**

N-Number Duplicates: 0 **N-Numbers Reported by Other Apts: 2**
Commented N-Numbers: 0 **Acft Not In Acft Reg: 2**

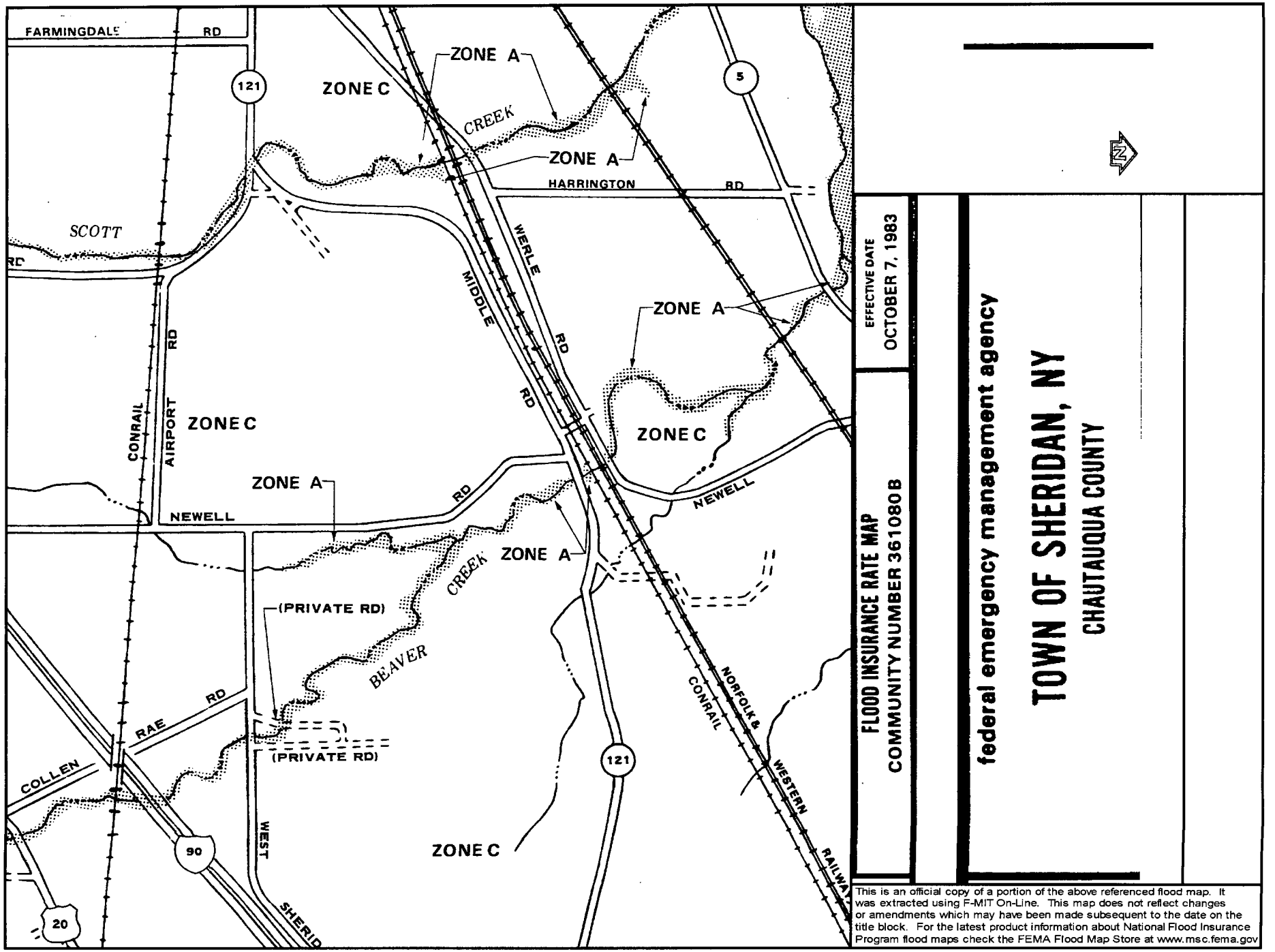
Confirmation of Counts Date: 2/13/2015 9:43:49 AM By: Bill Tucker

*Type derived from FAA Aircraft Registration data.
**Total verified aircraft counts, excluding dups and aircraft not found in FAA Aircraft Registration data.

	In 5010 (A)	In Inventory* (B)	Currently Validated** (C)
Single Engine	24	31	31
Multi Engine	6	6	5
Jet	0	3	3
Helicopter	1	1	0
Single, Multi, Jet, Heli	31	41	39

Appendix C

Environmental Information


FARMINGDALE RD
121
ZONE C
ZONE A
CREEK
ZONE A
5
HARRINGTON RD
SCOTT
RD
MIDDLE RD
WERLE RD
ZONE A
CONRAIL
AIRPORT RD
ZONE C
ZONE C
ZONE A
NEWELL RD
NEWELL
ZONE A
CREEK
(PRIVATE RD)
BEAVER
RAE RD
(PRIVATE RD)
COLLEN
121
NORFOLK & WESTERN RAILWAY
CONRAIL
WEST
90
ZONE C
20
SHERID
EFFECTIVE DATE
OCTOBER 7, 1983
FLOOD INSURANCE RATE MAP
COMMUNITY NUMBER 3610808
federal emergency management agency
TOWN OF SHERIDAN, NY
CHAUTAUQUA COUNTY
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

U.S. Fish and Wildlife Service

National Wetlands Inventory

Chautauqua County - Dunkirk Airport

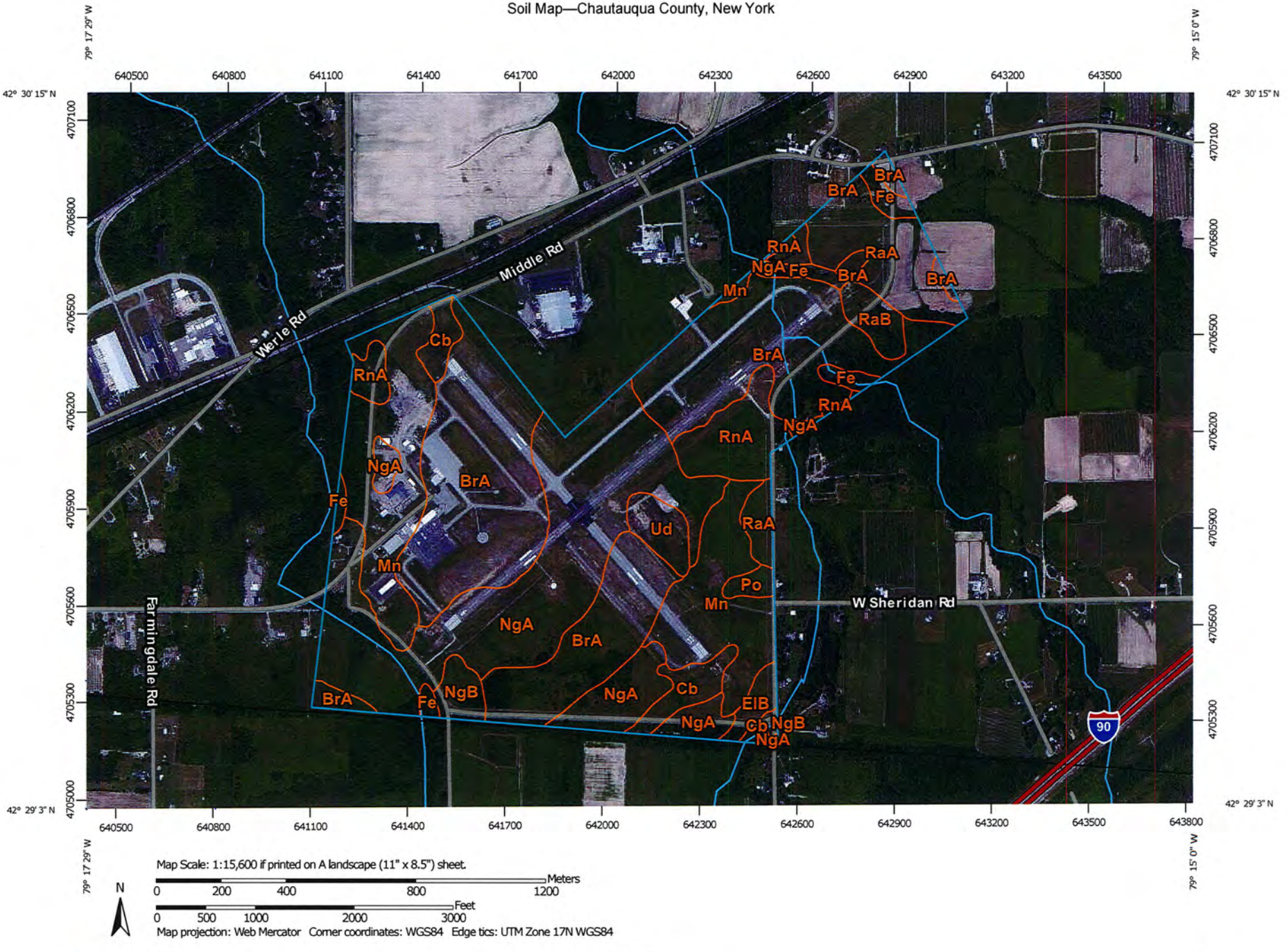
Jan 30, 2014

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

User Remarks:

Soil Map—Chautauqua County, New York



Map Scale: 1:15,600 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Chautauqua County, New York
Survey Area Data: Version 12, Sep 14, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Chautauqua County, New York (NY013)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
BrA	Barcelona silt loam, 0 to 3 percent slopes	167.6	35.0%
Cb	Canandaigua silt loam, loamy substratum	13.6	2.8%
ElB	Elnora fine sandy loam, 3 to 8 percent slopes	4.5	0.9%
Fe	Fluvaquents-Udifluvents complex, frequently flooded	10.6	2.2%
Mn	Minoa fine sandy loam	77.6	16.2%
NgA	Niagara silt loam, 0 to 3 percent slopes, loamy substratum	126.7	26.5%
NgB	Niagara silt loam, 3 to 8 percent slopes, loamy substratum	6.7	1.4%
Po	Pompton silt loam	2.9	0.6%
RaA	Raynham silt loam, 0 to 3 percent slopes	31.3	6.5%
RaB	Raynham silt loam, 3 to 8 percent slopes	7.0	1.5%
RnA	Rhinebeck silt loam, 0 to 3 percent slopes	22.7	4.7%
Ud	Udorthents, landfill	7.7	1.6%
Totals for Area of Interest		**478.9**	**100.0%**

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 LUKER ROAD
CORTLAND, NY 13045
PHONE: (607)753-9334 FAX: (607)753-9699
URL: www.fws.gov/northeast/nyfo/es/section7.htm

Consultation Code: 05E1NY00-2016-SLI-0330 November 24, 2015
Event Code: 05E1NY00-2016-E-00779
Project Name: Chautuaqua County/Dunkirk Airport

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (

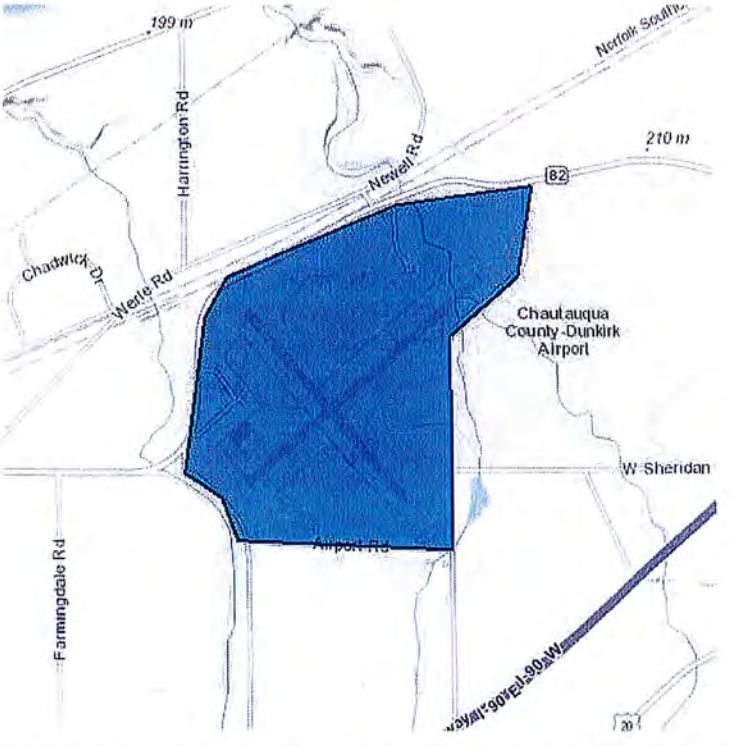
http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-79.26180839538574 42.49836473467721, -79.26584243774414 42.49577009111785, -79.26575660705566 42.48665634361928, -79.27863121032713 42.48703610961167, -79.27957534790039 42.488808320425846, -79.2817211151123 42.48988428106715, -79.28051948547363 42.49659279463399, -79.27923202514648 42.49836473467721, -79.26901817321777 42.50146550893477, -79.26095008850098 42.50228813751995, -79.26180839538574 42.49836473467721)))

Project Counties: Chautauqua, NY

United States Department of Interior
Fish and Wildlife Service

Project name: Chautuaqua County/Dunkirk Airport

Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	**Status**	**Has Critical Habitat**	**Condition(s)**
Northern long-eared Bat *(Myotis septentrionalis)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Indiana Bat

Myotis sodalis Miller and Allen, 1928

Mammals

Printer Friendly Version (PDF)

New York State Distribution [-]

Ten Indiana bat hibernacula are known to be extant. These hibernacula occur in the following counties: Albany (1), Essex (2), Jefferson (1), Onondaga (1), Ulster (4), and Warren (1). One of the Ulster County sites is among the 10 largest hibernacula for the species in the country. Maternity colonies have been identified through radio-telemetry studies and mist-net captures in Dutchess, Essex, Jefferson, Onondaga, and Ulster counties. Bachelor colonies have also been identified through radio-telemetry studies and mist-net captures in Albany, Dutchess, Jefferson, Orange, and Ulster counties.

Global Distribution [-]

The range of the Indiana bat includes much of the eastern half of the United States, from Vermont south to Massachusetts, Connecticut, and northern New Jersey, southwest to northwestern Florida and eastern Oklahoma, and north to southwestern Wisconsin. The largest hibernating populations are found in Indiana, Missouri, and Kentucky with other large hibernation sites in Arkansas, Illinois, New York, Ohio, Tennessee, Virginia, and West Virginia (USFWS 1999).

Please cite this page as:
New York Natural Heritage Program. 2015. Online Conservation Guide for *Myotis sodalis*. Available from: http://acris.nynhp.org/guide.php?id=7405. Accessed March 8th, 2016.

2001 AIRPORT MASTER PLAN UPDATE

NEW YORK STATE · PARKS · RECREATION · HISTORIC PRESERVATION
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

March 22, 2001

RECEIVED
MAR 29 2001
PASSERO ASSOCIATES

Lisa M. Cheung
Airport Planner
Passero Associates, P.C.
100 Liberty Pole Way
Rochester, New York 14604

Dear Ms. Cheung:

Re: INFO REQ
Dunkirk Airport
Sheridan, Chautauqua County
00PR4808

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Parks, Recreation and Historic Preservation Law, Section 14.09.

Based upon this review, it is the OPRHP's opinion that your project will have No Impact upon cultural resources in or eligible for inclusion in the State and National Registers of Historic Places.

Question #8

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont

Ruth L. Pierpont
Director

RLP:bsd

2001 AIRPORT MASTER PLAN UPDATE

BUILDINGS/STRUCTURES/DISTRICTS EVALUATION COMMENTS

PROJECT NUMBER 00 PR 4808

☒ Based upon a review of the information submitted and the scope of the project described, the State Historic Preservation Office (SHPO) has no concerns regarding historic buildings/structures/ districts within your project area.

☐ The following State/National Registers of Historic Places listed/eligible property/district is located within or adjacent to your project area. However, given the scope of the project, the State Historic Preservation Office (SHPO) has no concerns regarding historic buildings/structures/districts within your project area.

If you have any questions concerning this request for additional information, please call Claire L. Ross at (518) 237-8643 ext. 3259.

PLEASE BE SURE TO REFER TO THE PROJECT NUMBER NOTED ABOVE WHEN RESPONDING TO THIS REQUEST

Appendix D

Takeoff Minimums, Departure Procedures, and PAPI Obstacle Clearance Surface (OCS)

DUNKIRK, NY

CHAUTAUQUA COUNTY/ DUNKIRK (DKK)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 15120 (FAA)

TAKEOFF MINIMUMS: **Rwy 15,** 4std. w/min. climb of 354' per NM to 2000. **Rwy 33,** std. w/min. climb of 250' per NM to 2000.

DEPARTURE PROCEDURE: **Rwy 6,** climb heading 059° to 2200 then climbing left turn on heading 210° and DKK R-020 to DKK VORTAC before proceeding on course. **Rwy 15,** climb heading 149° to 2600 then climbing left turn on heading 265° and DKK R-085 to DKK VORTAC before proceeding on course. **Rwy 24,** climb heading 239° to 2600 then climbing right turn on heading 087° and DKK R-268 to DKK VORTAC before proceeding on course. **Rwy 33,** climb heading 329° to 2000 then climbing right turn on heading 175° and DKK R-358 to DKK VORTAC before proceeding on course.

NOTE: **Rwy 6,** trees beginning 2400' from DER, 138' right of centerline, up to 100' AGL/799' MSL. **Rwy 15,** vertical structures beginning 2' from DER, left and right of centerline, up to 3' AGL/695' MSL. Wall 372' from DER, 513' right of centerline, up to 13' AGL/703' MSL. Trees beginning 514' from DER, left and right of centerline, up to 100' AGL/773' MSL. Trees beginning 1452' from DER, 91' right of centerline, up to 100' AGL/776' MSL. Trees beginning 1462' from DER, 3' left of centerline, up to 100' AGL/809' MSL. Trees beginning 3002' from DER, left and right of centerline, up to 100' AGL/853' MSL. Poles beginning 3521' from DER, 95' left of centerline, up to 100' AGL/800' MSL. Poles beginning 3700' from DER, 14' right of centerline, up to 100' AGL/808' MSL. Trees beginning 1.1 NM from DER, left and right of centerline, up to 100' AGL/1058' MSL. Trees beginning 2.1 NM from DER, left and right of centerline, up to 100' AGL/1237' MSL. Trees beginning 2.8 NM from DER, left and right of centerline, up to 100' AGL/1372' MSL. Pole 3.3 NM from DER, 3258' right of centerline, up to 100' AGL/1362' MSL. Rising terrain beginning 3.3 NM from DER, 3625' right of centerline, up to 1649' MSL. **Rwy 24,** vehicles on roadway 413' from DER, across centerline, up to 15' AGL/704' MSL. Trees beginning 3597' from DER, 1098' left of centerline, up to 100' AGL/809' MSL. **Rwy 33,** vegetation beginning 7' from DER, 436' left of centerline, up to 100' AGL/674' MSL. Trees beginning 651' from DER, left and right of centerline, up to 100' AGL/711' MSL. Trees beginning 1080' from DER, left and right of centerline, up to 100' AGL/722' MSL. Trees beginning 2025' from DER, left and right of centerline, up to 100' AGL/747' MSL.

EAST HAMPTON, NY

EAST HAMPTON (HTO)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 14149 (FAA)

TAKEOFF MINIMUMS: **Rwy 34,** 300-1¼ or std. w/min. climb of 430' per NM to 400.

NOTE: **Rwy 10,** vehicles on roadway and trees beginning 107' from DER, left and right of centerline, up to 61' AGL/93' MSL. Pole 366' from DER, 244' left of centerline, 37' AGL/69' MSL. Pole 489' from DER, 300' right of centerline, 35' AGL/62' MSL. Trees beginning 1044' from DER, left and right of centerline, up to 100' AGL/144' MSL. **Rwy 16,** vehicles on roadway and trees beginning 177' from DER, 122' right of centerline, up to 44' AGL/78' MSL. Trees beginning 375' from DER, 31' left of centerline, up to 50' AGL/76' MSL. Train on tracks 903' from DER, left and right of centerline, up to 23' AGL/58' MSL. Trees beginning 955' from DER, left and right of centerline, up to 100' AGL/144' MSL. **Rwy 28,** trees beginning 53' from DER, 480' left of centerline, up to 49' AGL/103' MSL. Trees beginning 221' from DER, left and right of centerline, up to 57' AGL/117' MSL. Trees beginning 1034' from DER, left and right of centerline, up to 100' AGL/199' MSL. **Rwy 34,** trees beginning 54' from DER, 494' right of centerline, up to 43' AGL/81' MSL. Trees beginning 103' from DER, 151' left of centerline, up to 36' AGL/76' MSL. Vehicles on roadway and trees beginning 289' from DER, left and right of centerline, up to 48' AGL/86' MSL. Power lines beginning 1264' from DER, left and right of centerline, up to 132' AGL/176' MSL. Trees beginning 2043' from DER, left and right of centerline, up to 100' AGL/259' MSL. Building 3806' from DER, 874' right of centerline, 42' AGL/152' MSL. Trees 6049' from DER, 1980' left of centerline, up to 100' AGL/239' MSL.

ELLENVILLE, NY

JOSEPH Y RESNICK (N89)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 12320 (FAA)

TAKEOFF MINIMUMS: **Rwy 4,** 400-1½ w/min. climb of 402' per NM to 4300 or std. w/min. climb of 490' per NM to 4300 or 2700-3 for climb in visual conditions. **Rwy 22,** std. w/min. climb of 470' per NM to 2000 or 2700-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 4,** climb on heading 047° to 4300' before proceeding on course or for climb in visual conditions, cross Joseph Y Resnick airport at or above 2800 before proceeding on course. When executing VCOA, notify ATC prior to departure. **Rwy 22,** climb on heading 235° to 2900' before proceeding on course or for climb in visual conditions, cross Joseph Y Resnick airport at or above 2800 before proceeding on course. When executing VCOA, notify ATC prior to departure.

NOTE: **Rwy 4,** trees 20' from DER, 11' right of centerline, up to 109' AGL/419' MSL. Trees 1187' from DER, 456' left of centerline, up to 109' AGL/ 399' MSL. Trees 2154' from DER, 416' right of centerline, 109' AGL/ 379' MSL. Trees 2962' from DER, 780' left of centerline, 109' AGL/399' MSL. Trees 4024' from DER, 1005' left of centerline, 109' AGL/ 419' MSL. **Rwy 22,** trees beginning at DER, 175' right of centerline, up to 109' AGL/419' MSL. Trees beginning at DER, 288' left of centerline, up to 109' AGL/419' MSL. Pole 2196' from DER, 169' left of centerline, 84' AGL/384' MSL.

NACO Number	Obstacle Type	Latitude	Longitude	Runway End Designator	Risk Level	Penetrates	Penetration Amount	Requires Mitigation	**Original Source Timestamp**	Advisory Circular Reference	Status	Formerly
36-AIRPORTSGIS-191264	TREE	N 42 29 9.77	W 79 15 58.97	33	High	20:1 Surface(s)	32.15 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 16899
36-AIRPORTSGIS-191267	TREE	N 42 29 10.17	W 79 16 0.60	33	High	20:1 Surface(s)	31.91 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 16902
36-AIRPORTSGIS-191265	TREE	N 42 29 9.78	W 79 15 59.16	33	High	20:1 Surface(s)	24.07 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 16900
36-AIRPORTSGIS-191260	TREE	N 42 29 10.99	W 79 15 58.24	33	High	20:1 Surface(s)	22.7 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 16895
36-AIRPORTSGIS-191197	TREE	N 42 29 9.97	W 79 15 53.22	33	High	20:1 Surface(s)	22.41 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 16832
36-AIRPORTSGIS-191261	TREE	N 42 29 11.09	W 79 15 59.59	33	High	20:1 Surface(s)	21.29 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 16896
36-AIRPORTSGIS-191196	TREE	N 42 29 10.19	W 79 15 53.41	33	High	20:1 Surface(s)	19.47 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Still remain	AGIS 16831 (DKK0144)
36-AIRPORTSGIS-191141	TREE	N 42 29 55.48	W 79 16 47.41	15	High	20:1 Surface(s)	18.51 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 17043
36-AIRPORTSGIS-191182	TREE	N 42 29 13.68	W 79 15 55.81	33	High	20:1 Surface(s)	17.4 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Still remain	AGIS 16817 (DKK0131)
36-AIRPORTSGIS-191263	TREE	N 42 29 9.78	W 79 15 57.52	33	High	20:1 Surface(s)	15.75 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 16898
36-AIRPORTSGIS-191262	TREE	N 42 29 11.20	W 79 16 1.76	33	High	20:1 Surface(s)	15.01 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 16897
36-AIRPORTSGIS-191149	TREE	N 42 29 53.01	W 79 16 47.51	15	Medium	20:1 Surface(s)	10.05 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 17051
36-AIRPORTSGIS-191201	TREE	N 42 29 9.52	W 79 15 54.64	33	Medium	20:1 Surface(s)	8.59 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 16836
36-AIRPORTSGIS-191142	TREE	N 42 29 54.47	W 79 16 47.45	15	Medium	20:1 Surface(s)	6.99 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 17044
36-AIRPORTSGIS-191150	TREE	N 42 29 53.90	W 79 16 50.22	15	Medium	20:1 Surface(s)	6.78 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 17052
36-AIRPORTSGIS-191202	TREE	N 42 29 10.03	W 79 15 55.98	33	Medium	20:1 Surface(s)	6.61 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	AGIS 16837
36-AIRPORTSGIS-191203	TREE	N 42 29 8.85	W 79 15 56.57	33	Medium	20:1 Surface(s)	4.66 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Still remain	AGIS 16838 (DKK0142)
36-AIRPORTSGIS-191220	TREE	N 42 29 6.02	W 79 15 56.04	33	Low	20:1 Surface(s)	1.58 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Still remain	AGIS 16855 (DKK0152)
36-AIRPORTSGIS-191137	TREE	N 42 29 56.07	W 79 16 45.60	15	Low	20:1 Surface(s)	0.75 feet	YES	**22-May-15**	150/5300-13A - Table 3-2 - Line 4	Removed	KDKK0046

6/11/2015 Trees removed during the obstruction removal project late 2014/2015

Obstructions still remain

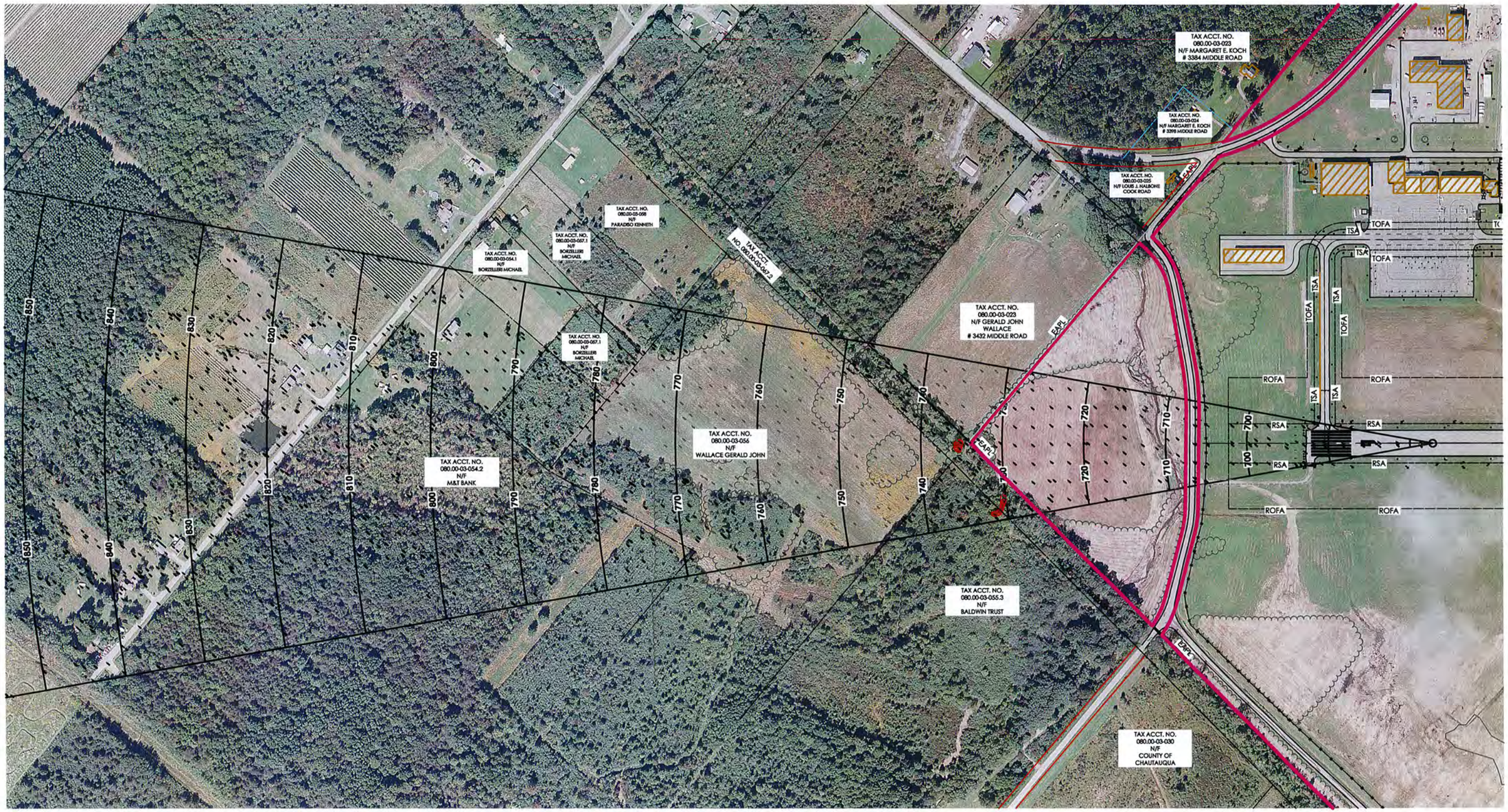
Formerly Removed: removed by OLD AGIS # back on January 21, 2015

MAGNETIC NORTH
10°15'W (2015)

TRUE NORTH

200 0 100 200 400

SCALE 1" = 200'



PASSERO ASSOCIATES

Engineering • Architecture

www.passero.com

Stamp:

Client:

Chautauqua County

454 North Work Street
Falconner, New York 14733

Passero Associates

242 W. Main Street
Rochester, NY 14614
(585) 325-1000
Fax: (585) 325-1691

Principal-in-Charge	Wayne F.Wegman, P.E.
Project Manager	Lisa Cheung
Designed by	Wayne B. Zian

Revisions

No.	Date	By	Description

PAPI Approach Plan and Profile Runway 6

Master Plan Update

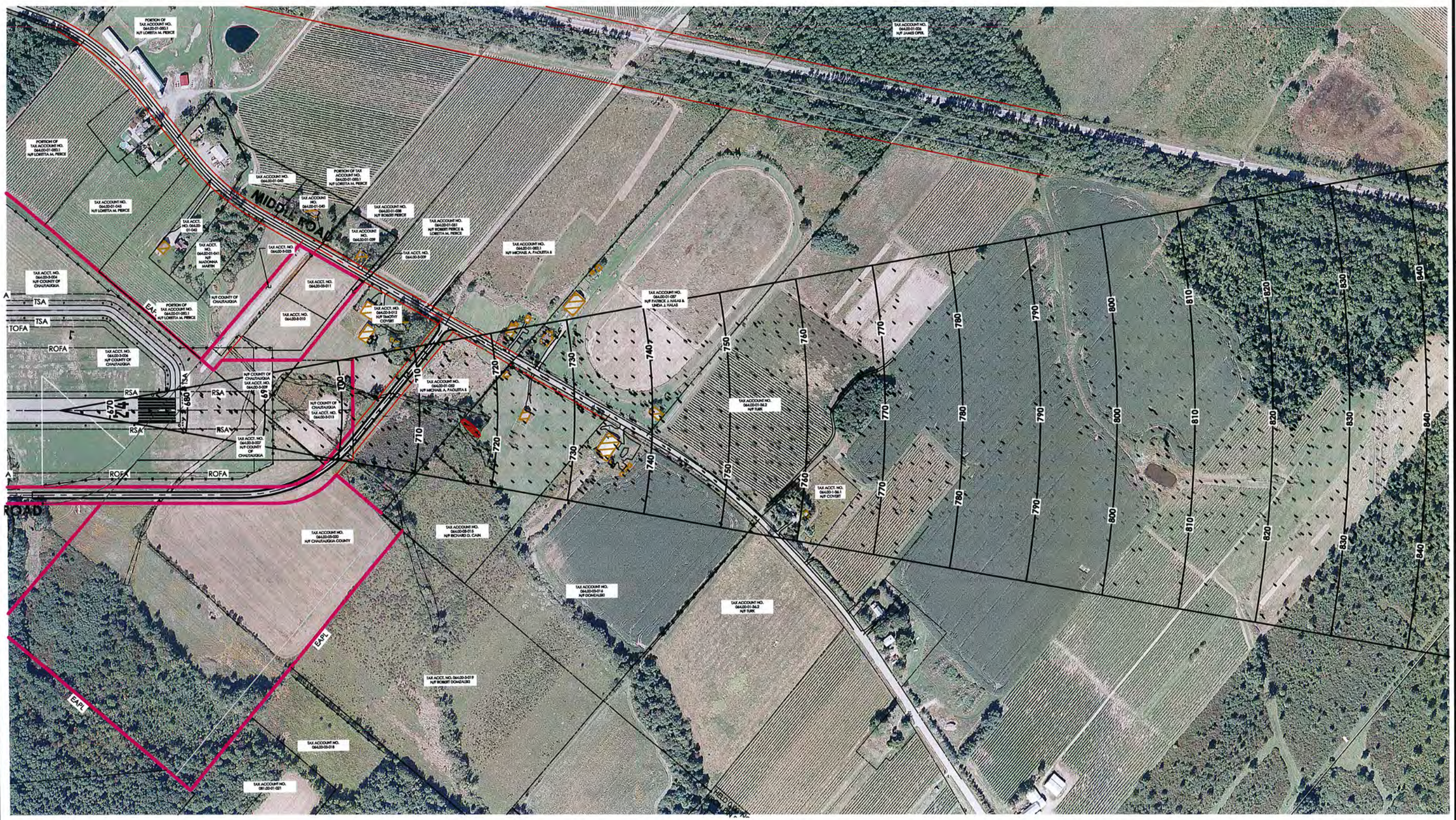
Chautauqua County Dunkirk Airport

Town/City: Sheridan
County: Chautauqua State: New York

Project No.
95019.46

Drawing No.
-

Date
December 2015



PASSERO ASSOCIATES

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Stamp:

Client:

Chautauqua County

454 North Work Street
Falconner, New York 14733

Passero Associates

242 W. Main Street, Rochester, NY 14614 (585) 325-1000 Fax: (585) 325-1691

Principal-in-Charge: Wayne F. Wegman, P.E.
Project Manager: Lisa Cheung
Designed by: Wayne B. Zian

Revisions

No.	Date	By	Description

PAPI Approach Plan and Profile Runway 24

Master Plan Update

Chautauqua County Dunkirk Airport

Town/City: Sheridan
County: Chautauqua State: New York

Project No.
95019.46

Drawing No.
-

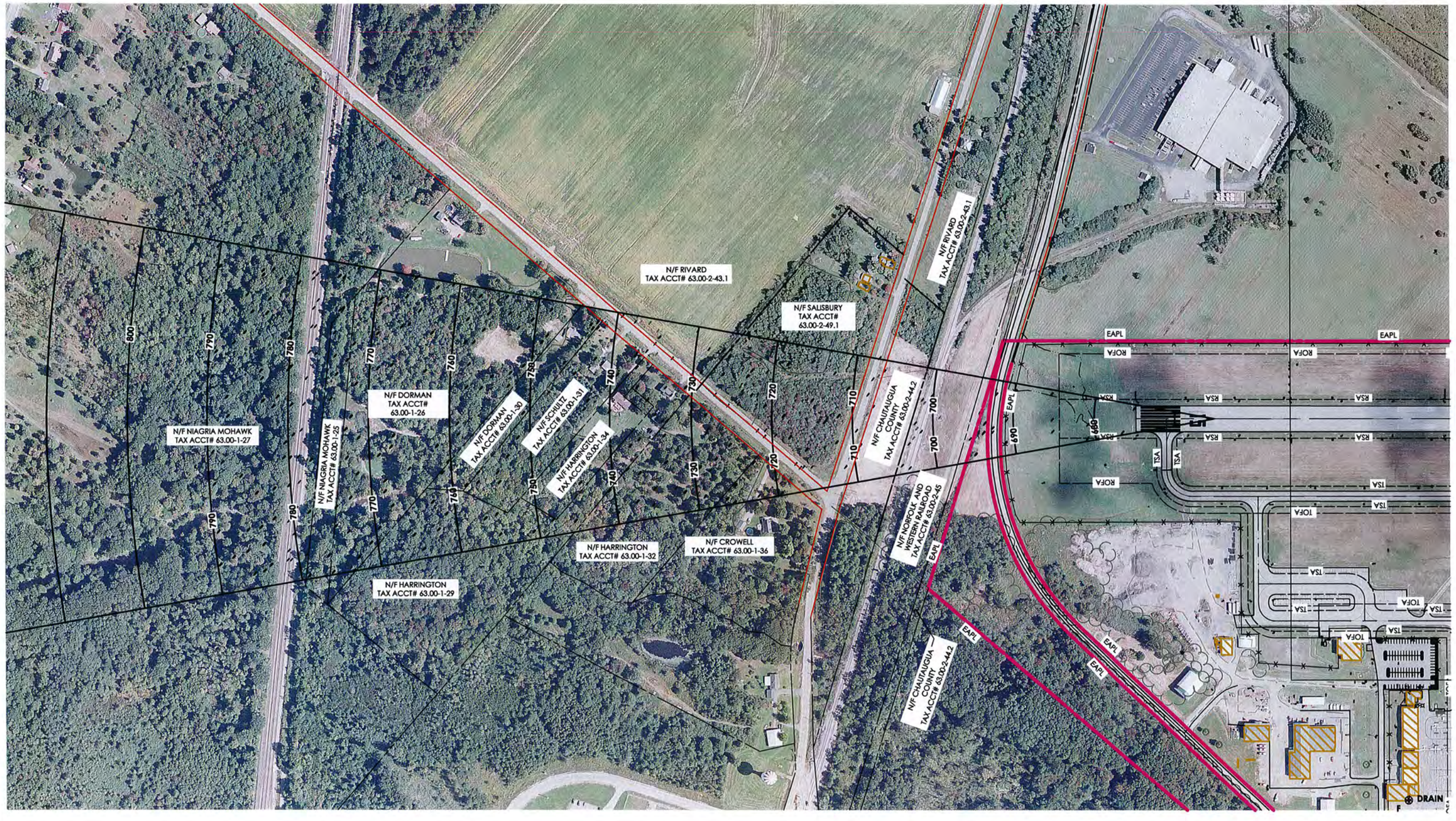
Date
December 2015

TRUE NORTH

MAGNETIC NORTH 10°15'W (2015)

200 0 100 200 400

SCALE 1" = 200'



PASSERO ASSOCIATES

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Stamp:

Client:

Chautauqua County

454 North Work Street
Falconner, New York 14733

Passero Associates

242 W. Main Street, Rochester, NY 14614 (585) 325-1000 Fax: (585) 325-1691

Principal-in-Charge	Wayne F.Wegman, P.E.
Project Manager	Lisa Cheung
Designed by	Wayne B. Zian

Revisions

No.	Date	By	Description

PAPI Approach Plan and Profile Runway 15

Master Plan Update

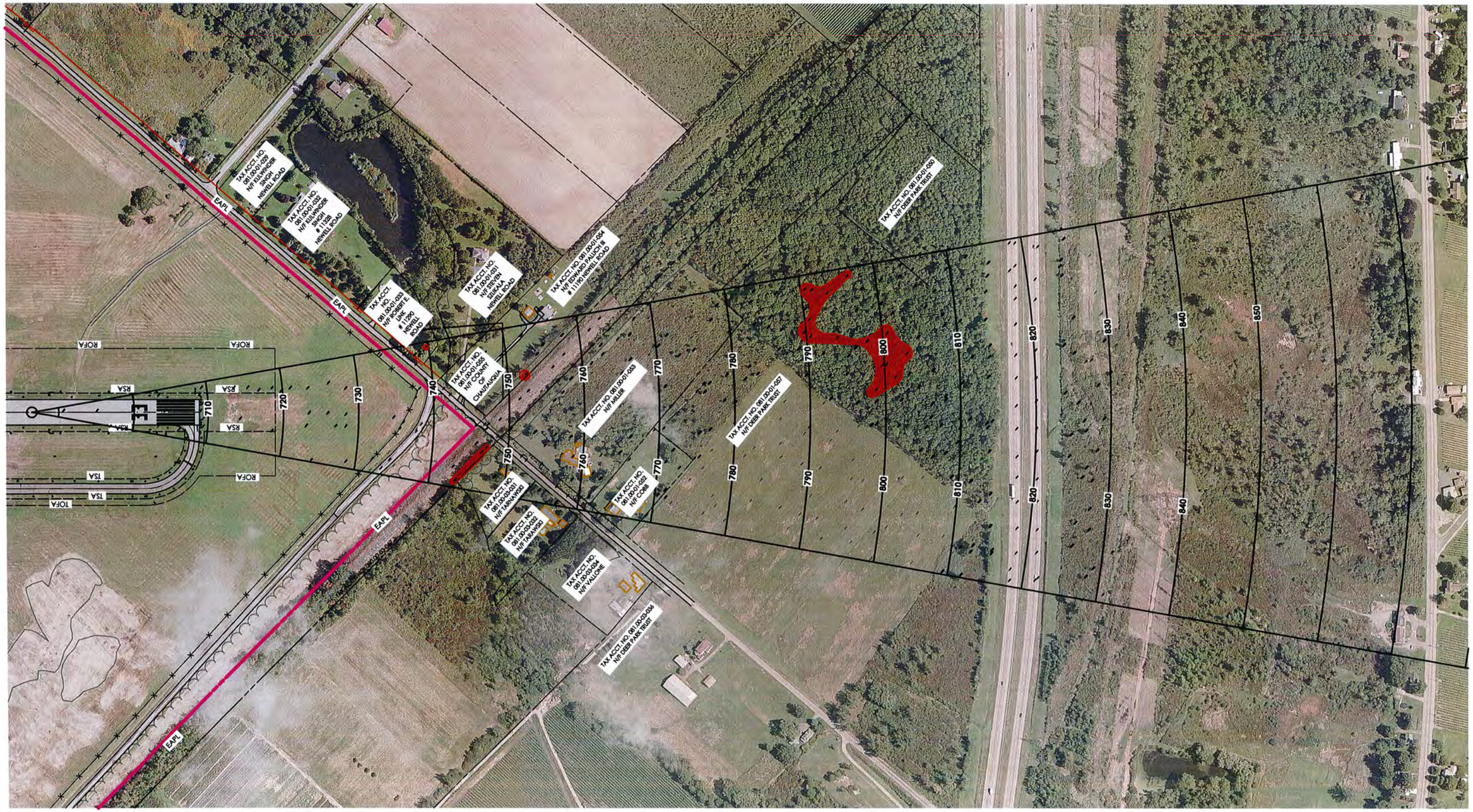
Chautauqua County Dunkirk Airport

Town/City: Sheridan
County: Chautauqua State: New York

Project No.
95019.46

Drawing No.
-

Date
December 2015



PASSERO ASSOCIATES
Engineering • Architecture
www.passero.com

Stamp:

Client:

Chautauqua County

454 North Work Street
Falconner, New York 14733

Passero Associates

242 W. Main Street, Rochester, NY 14614 (585) 325-1000 Fax: (585) 325-1691

Principal-in-Charge: Wayne F.Wegman, P.E.
Project Manager: Lisa Cheung
Designed by: Wayne B. Zian

Revisions

No.	Date	By	Description

PAPI Approach Plan and Profile Runway 33

Master Plan Update

Chautauqua County Dunkirk Airport

Town/City: Sheridan
County: Chautauqua State: New York

Project No.
95019.46

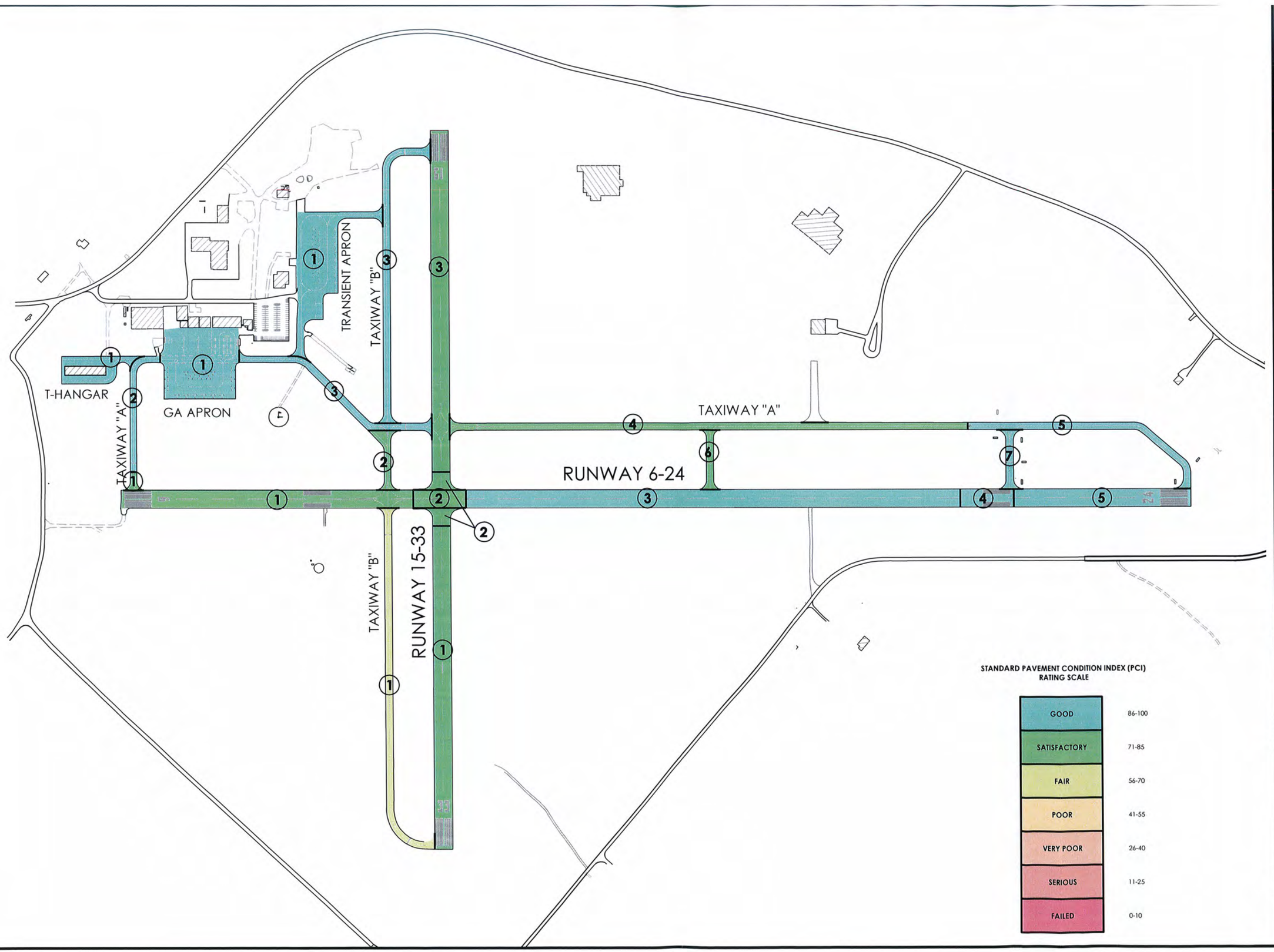
Drawing No.
-

Date
December 2015

Z:\95019500019.00046\Drawings\AirportBlocks\2017 46 RUNWAY 10-33 API PLAN, wzian

Appendix E

Pavement Management Study Summary & FAA Useful Life Table



STANDARD PAVEMENT CONDITION INDEX (PCI) RATING SCALE

GOOD	86-100
SATISFACTORY	71-85
FAIR	56-70
POOR	41-55
VERY POOR	26-40
SERIOUS	11-25
FAILED	0-10

PASSERO ASSOCIATES
Engineering • Architecture
www.passero.com

MAGNETIC NORTH 10°18'W (2014)
TRUE NORTH

Stamp:

Client:
Chautauqua County
454 North Work Street
Falconer, NY 14733

Passero Associates
242 W. Main Street, Rochester, NY 14614 (585) 325-1000 Fax: (585) 325-1691
Principal-in-Charge Wayne F.Wegman, P.E.
Project Manager Shawn R. Bray, P.E.
Designed by ACL, MAS

Revisions

No.	Date	By	Description
1			

Pavement Condition By Section

Pavement Management Study

Chautauqua County Airport/Dunkirk

Town/City: Sheridan
County: Chautauqua State: New York

Project No.
95000019.0048

Drawing No.
Appendix D

Date
September, 2014

PAPI Obstacle Clearance Surface is an imaginary surface associated with the NAVAID PAPI. The PAPI provides visual navigation to the runway by providing light signals that the pilot can follow to determine glidepath into a runway. A PAPI can be used for mitigation to tree obstructions to the 20:1 surface, with FAA flight procedures approval, but the OCS must be clear to do so. The following graphics show the PAPI OCS for each runway end based on aerial data acquired for this Master Plan Update.

3-13. Useful Life Test for Equipment and Facilities.

The useful life of the facility or equipment being rehabilitated, reconstructed or replaced must have been met in order for the project to be funded. The exception is when the ADO has determined that the rehabilitation, reconstruction, or replacement is necessary for safety reasons. Table 3-8 provides a list of minimum useful lives.

Although the minimum useful life of facility, equipment or vehicles may have been met, this does *not* automatically mean that the rehabilitation, reconstruction or replacement of the item is needed. Simply meeting the minimum useful life does not justify replacing the item if the facility, equipment, or vehicle is performing as intended.

Table 3-8 Minimum Useful Life

Project Type	Useful Life
a. All construction projects (unless listed separately below)	20 years
b. All equipment and vehicles (unless listed separately below)	10 years
c. Pavement rehabilitation (not reconstruction, which is 20 years)	10 years
d. Asphalt seal coat, slurry seal, and joint sealing	3 years
e. Concrete joint replacement	7 years
f. Airfield lighting and signage	10 years
g. ARFF vehicles	15 years
h. ARFF structural gear (firefighting suits), which has less heat insulation than proximity gear (per the National Fire Protection Association 1971 Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting)	7 years
i. ARFF proximity gear (firefighting suits), which is also referred to as slicks, bunker, or turn out gear (per the National Fire Protection Association 1971 Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting)	5 years
j. NAVAIDs	15 years
k. Buildings	40 years
l. Land	Unlimited
m. Loading Bridges	20 years

4.2 PAVEMENT STRENGTH

FAA AC 150/5335-5C defines the methodology to compute the theoretical pavement strength. This advisory circular provides guidance for using the standardized International Civil Aviation Organization (ICAO) method to report pavement strength. The standardized method, known as the Aircraft Classification Number - Pavement Classification Number (ACN-PCN) method, was developed and adopted as an international standard to facilitate the exchange of pavement strength rating information.

A Pavement Classification Number (PCN) expresses the load-carrying capacity of a pavement for unrestricted operations. Similarly, an Aircraft Classification Number (ACN) expresses the relative effect of an aircraft at a given landing gear configuration and maximum takeoff weight on a pavement structure for a specified standard subgrade strength. The concept of the ACN-PCN system is that pavement can generally support an aircraft with an ACN that is equal to or less than the PCN, without restriction. Aircraft with ACN exceeding the computed PCN may still operate on the pavement on a limited basis at the discretion of the airport operator.

The FAA developed software COMFAA 3.0 was used to calculate the PCN for Runway 6-24 and Runway 15-33. The official ACN for each aircraft is provided by the aircraft manufacturer. The PCN is defined by 5 components. Each component is described below:

1. The first number is a numerical value that indicates the load-carrying capacity of a pavement. These values are provided by the COMFAA software based on the pavement structure and aircraft fleet using the pavement, both input by the user.

2. The second component describes the pavement type. The pavement classifications are; R - Rigid, or F- Flexible. Both Runway 6-24 and Runway 15-33 are asphalt pavement and receive a pavement classification of F.

3. The third component provides the subgrade strength category. Four standard subgrade categories for Rigid and Flexible pavements as described in AC 150/5335-5B are summarized in Tables 5-3 and 5-4.

Table 5-3 Subgrade Strength Category for Rigid Pavement

Subgrade Strength Category	Subgrade Support k-Value pci (MN/m3)	Represents pci (MN/m3)	Code Designation
High	552.6 (150)	k > 442 (>120)	A
Medium	294.7 (80)	221<k<442 (60<k<120)	B
Low	147.4 (40)	92<k<221 (25<k<60)	C
Ultra Low	73.7 (20)	k<92 (<25)	D

Table 5-4 Subgrade Strength Category for Flexible Pavement

Subgrade Strength Category	Subgrade Support CBR-Value	Represents	Code Designation
High	15	CBR > 13	A
Medium	10	8<CBR<13	B
Low	6	4<CBR<8	C
Ultra Low	3	CBR<4	D

Based on the subsurface investigation and laboratory CBR computations found in **Appendix G - Geotechnical Data**, a subgrade strength category of C is assigned to both Runway 6-24 and Runway 15-33.

4. The fourth component is the allowable tire pressure. The same tire pressure codes applies for both rigid and flexible pavement. Based on the pavement structure and aircraft fleet input by the user, COMFAA recommends a tire pressure code. For both Runway 6-24 and Runway 15-33, a tire pressure code of X is recommended.

Table 5-5 Tire Pressure Codes for Rigid and Flexible Pavements

Category	Code	Tire Pressure Range
High	W	No pressure limit
Medium	X	Pressure limited to 218 psi (1.5 MPa)
Low	Y	Pressure limited to 145 psi (1.00 MPa)
Very Low	Z	Pressure limited to 73 psi (0.50 MPa)

5. The fifth component is the method used to determine the PCN. There are two methods;

   T - is the code for a "technical" evaluation. In this method there was technical data and computations used to determine the PCN.

   U - is the code for a "using aircraft" evaluation. In this method the highest ACN, from observation and experience is used to determine the PCN.

The computed PCN for Runway 6-24 and Runway 15-33 at Chautauqua County Airport/Dunkirk is provided in *Table 5-6 - DKK Pavement Classification Number.* Output data from the FAA software, COMFAA 3.0, is provided in **Appendix E - PCN Calculations**.

Table 5-6 - DKK Pavement Classification

Branch	PCN	Airplane Gross Weight (lbs)		
		SW	DW	DTW
Runway 6-24	18 F/C/X/T	49,600	68,000	130,000
Runway 15-33	18 F/C/X/T	49,600	68,000	130,000

Appendix F

FAA Approval Letter of Forecasts

Lisa Cheung

From: David.Carlin@faa.gov
Sent: Tuesday, January 05, 2016 9:40 PM
To: Lisa Cheung
Cc: tuckerb@co.chautauqua.ny.us
Subject: Dunkirk Forecast Approval

Lisa,

I have reviewed the Aviation Activity Forecasts for the Airport Master Plan update currently underway for Dunkirk Airport (DKK).

Pursuant to this review, I find your forecasting methodology acceptable and subsequent conclusions reasonable. Therefore, I am approving the Aviation Activity Forecasts for Dunkirk.

Should you have any questions or wish to discuss this matter in further detail, please do not hesitate to contact me.

Dave

David Carlin, MPA
Community Planner
Federal Aviation Administration - NYADO
1 Aviation Plaza, Suite 111
Jamaica, NY 11434
Phone: (718) 995-5762
Email: david.carlin@faa.gov

Appendix G
ALS Information

Dunkirk Airport

Source: ASOS Network (https://mesonet.agron.iastate.edu/request/download.phtml?network=NY_ASOS)

Existing approach minima
Rwy 24 LP/LNAV = 1 visibility

Year	Total Weather Occurrences	Total IFR Occurrences 0.25 <x<3	% IFR of weather occurrences	% Total Occurrences Visibility = 0.25	% Total Occurrences Visibility = 0.5	% Total Occurrences Visibility = 0.75	% Total Occurrences Visibility = 1	Additional instrument coverage if visibility reduced 1/4 mile
2012	12212	1044	8.5%	9.6%	6.3%	12.5%	11.3%	12.5%
2013	12247	1913	15.6%	3.0%	3.3%	6.0%	4.7%	6.0%
2014	12026	1783	14.8%	3.5%	3.9%	7.0%	7.5%	7.0%
2015	12119	1702	14.0%	4.6%	4.8%	8.8%	7.9%	8.8%
								8.5%

TFMSC Report (Airport)

From 01/01/2010 To 01/01/2015 | Airport=DKK

#	Business Aviation	Physical Class	Date	Aircraft	Departures	Arrivals	Total Operations	Departure Seats	Average Departure Seats	Arrival Seats	Average Arrival Seats
1	Unknown	-	11/20/2012	AH46	1	0	1	0	0	0	0
2	No	-	1/10/2010	C400 - Cessna C-400	0	1	1	0	0	0	0
3	No	-	2/21/2010	T210 - Cessna T210M	1	0	1	2	2	0	0
4	No	-	3/5/2010	UH60 - Blackhawk Helicopter	1	0	1	4	4	0	0
5	No	-	4/10/2010	C400 - Cessna C-400	0	1	1	0	0	0	0
6	No	-	4/12/2010	EXP - McDonnell MD-902 Explorer	0	1	1	0	0	7	7
7	No	-	4/20/2010	C82 - Fairchild F-78 Packet	1	0	1	0	0	0	0
8	No	-	4/25/2010	T210 - Cessna T210M	1	0	1	2	2	0	0
9	No	-	5/5/2010	UH60 - Blackhawk Helicopter	1	0	1	4	4	0	0
10	No	-	5/15/2010	-1 - unknown	1	1	2	0	0	0	0
11	No	-	5/24/2010	H47 - Boeing CH-47 Chinook	1	0	1	40	40	0	0
12	No	-	6/2/2010	HELO - Helicoper	0	1	1	0	0	4	4
13	No	-	6/12/2010	-1 - unknown	0	1	1	0	0	0	0
14	No	-	6/27/2010	-1 - unknown	1	0	1	0	0	0	0
15	No	-	7/17/2010	-1 - unknown	0	1	1	0	0	0	0
Sub-Total for -1 - unknown					1	2	3	0	0	0	0
16	No	-	7/21/2010	UH60 - Blackhawk Helicopter	1	0	1	4	4	0	0
17	No	-	7/29/2010	-1 - unknown	1	0	1	0	0	0	0
18	No	-	8/19/2010	UH60 - Blackhawk Helicopter	1	1	2	4	4	4	4
19	No	-	8/29/2010	-1 - unknown	1	0	1	0	0	0	0
20	No	-	9/10/2010	AS65 - Aérospatiale AS-366	1	0	1	4	4	0	0
21	No	-	9/13/2010	VELO - Velocity	1	0	1	4	4	0	0
22	No	-	9/21/2010	HELO - Helicoper	0	1	1	0	0	4	4
23	No	-	10/15/2010	GP4 - CNGP NGP Cessna	1	0	1	0	0	0	0
24	No	-	11/12/2010	-1 - unknown	0	1	1	0	0	0	0
25	No	-	11/15/2010	HELO - Helicoper	0	1	1	0	0	4	4
26	No	-	11/28/2010	DECA - Sportstar	0	1	1	0	0	0	0
27	No	-	11/29/2010	-1 - unknown	0	1	1	0	0	0	0
28	No	-	3/10/2011	-1 - unknown	1	0	1	0	0	0	0
29	No	-	4/30/2011	-1 - unknown	1	0	1	0	0	0	0
Sub-Total for -1 - unknown					2	1	3	0	0	0	0
30	No	-	5/23/2011	HELO - Helicoper	0	1	1	0	0	4	4
31	No	-	6/9/2011	CN35 - CASA CN-235	1	0	1	0	0	0	0
32	No	-	6/15/2011	-1 - unknown	1	0	1	0	0	0	0
33	No	-	7/7/2011	EXP - McDonnell MD-902 Explorer	0	1	1	0	0	7	7
34	No	-	7/14/2011	-1 - unknown	0	1	1	0	0	0	0
35	No	-	7/25/2011	P28L - unknown	1	0	1	0	0	0	0
36	No	-	7/31/2011	-1 - unknown	1	0	1	0	0	0	0
37	No	-	7/31/2011	NA4 - Unis NA-40 Bongo NA40	1	0	1	0	0	0	0
Sub-Total for 07/31/2011					2	0	2	0	0	0	0
38	No	-	8/4/2011	-1 - unknown	1	0	1	0	0	0	0
39	No	-	8/4/2011	HELO - Helicoper	0	1	1	0	0	4	4
Sub-Total for 08/04/2011					1	1	2	0	0	4	4
40	No	-	8/12/2011	HELO - Helicoper	0	1	1	0	0	4	4
Sub-Total for HELO - Helicoper					0	2	2	0	0	8	4
41	No	-	8/19/2011	-1 - unknown	1	0	1	0	0	0	0

42	No	-	9/3/2011	-1 - unknown	0	1	1	0	0	0	0
Sub-Total for -1 - unknown					1	1	2	0	0	0	0
43	No	-	9/11/2011	EXPM - Lion (APM-21)	1	0	1	0	0	0	0
44	No	-	9/16/2011	FBA2 - Found FBA-2	1	0	1	0	0	0	0
45	No	-	10/12/2011	-1 - unknown	0	1	1	0	0	0	0
46	No	-	10/13/2011	UH60 - Blackhawk Helicopter	1	0	1	4	4	0	0
47	No	-	10/22/2011	P68A - unknown	1	0	1	0	0	0	0
48	No	-	11/27/2011	M20S - Mooney M20S	0	1	1	0	0	4	4
49	No	-	12/1/2011	HELO - Helicoper	2	0	2	8	4	0	0
50	No	-	12/12/2011	C400 - Cessna C-400	0	1	1	0	0	0	0
51	No	-	1/16/2012	HXB - Experimental Aircraft	1	0	1	0	0	0	0
52	No	-	1/20/2012	B748 - Boeing 747-8	1	0	1	0	0	0	0
53	No	-	4/20/2012	NAV1 - North American NA-145	0	1	1	0	0	4	4
54	No	-	5/14/2012	-1 - unknown	1	0	1	0	0	0	0
55	No	-	6/24/2012	F22 - Boeing Raptor F22	1	0	1	1	1	0	0
56	No	-	6/28/2012	HXB - Experimental Aircraft	0	1	1	0	0	0	0
57	No	-	7/21/2012	HELO - Helicoper	0	1	1	0	0	4	4
58	No	-	7/21/2012	HXB - Experimental Aircraft	0	1	1	0	0	0	0
Sub-Total for 07/21/2012					0	2	2	0	0	4	2
59	No	-	7/30/2012	B206 - Beagle B206	1	0	1	0	0	0	0
60	No	-	8/21/2012	CH47 - Boeing CH-47 Chinook	3	0	3	0	0	0	0
61	No	-	8/21/2012	H47 - Boeing CH-47 Chinook	0	3	3	0	0	120	40
Sub-Total for 08/21/2012					3	3	6	0	0	120	40
62	No	-	9/14/2012	-1 - unknown	0	1	1	0	0	0	0
63	No	-	9/14/2012	F260 - Aermacchi T-260	0	1	1	0	0	4	4
Sub-Total for 09/14/2012					0	2	2	0	0	4	2
64	No	-	10/22/2012	-1 - unknown	0	1	1	0	0	0	0
65	No	-	10/24/2012	AH47 - unknown	1	0	1	0	0	0	0
66	No	-	11/2/2012	EXPT - experimental	1	0	1	0	0	0	0
67	No	-	11/20/2012	UH60 - Blackhawk Helicopter	1	0	1	4	4	0	0
68	No	-	11/21/2012	H60 - Sikorsky SH-60 Seahawk	1	0	1	4	4	0	0
69	No	-	1/5/2013	-1 - unknown	1	0	1	0	0	0	0
70	No	-	1/9/2013	H60 - Sikorsky SH-60 Seahawk	0	1	1	0	0	4	4
71	No	-	1/29/2013	H60 - Sikorsky SH-60 Seahawk	1	1	2	4	4	4	4
Sub-Total for H60 - Sikorsky SH-60 Seahawk					1	2	3	4	4	8	4
72	No	-	1/30/2013	B206 - Beagle B206	1	0	1	0	0	0	0
73	No	-	3/19/2013	H47 - Boeing CH-47 Chinook	0	2	2	0	0	80	40
74	No	-	3/23/2013	-1 - unknown	0	1	1	0	0	0	0
75	No	-	5/30/2013	HELO - Helicoper	1	0	1	4	4	0	0
76	No	-	6/24/2013	-1 - unknown	0	1	1	0	0	0	0
77	No	-	7/14/2013	M02J - unknown	1	0	1	0	0	0	0
78	No	-	7/21/2013	-1 - unknown	1	0	1	0	0	0	0
79	No	-	7/22/2013	HELO - Helicoper	0	1	1	0	0	4	4
80	No	-	8/3/2013	MAUL - Maule Aircraft	1	0	1	0	0	0	0
81	No	-	8/9/2013	-1 - unknown	1	0	1	0	0	0	0
82	No	-	9/6/2013	RV10 - Experimental	0	1	1	0	0	0	0
83	No	-	9/9/2013	RV10 - Experimental	1	0	1	0	0	0	0
Sub-Total for RV10 - Experimental					1	1	2	0	0	0	0
84	No	-	9/27/2013	PA21 - Piper Pacer	0	1	1	0	0	0	0
85	No	-	10/3/2013	PITT - Pitts S-1 Special	1	0	1	0	0	0	0
86	No	-	3/8/2014	-1 - unknown	0	1	1	0	0	0	0
87	No	-	4/9/2014	UH60 - Blackhawk Helicopter	2	0	2	8	4	0	0
88	No	-	4/27/2014	HELO - Helicoper	1	0	1	4	4	0	0
89	No	-	5/16/2014	H47 - Boeing CH-47 Chinook	0	1	1	0	0	40	40

90	No	-	6/6/2014	P44D - unknown	1	1	2	0	0	0	0
91	No	-	6/7/2014	HXB1 - B18T Westwind III Hamilton Aviation	1	0	1	0	0	0	0
92	No	-	6/11/2014	AS65 - Aérospatiale AS-366	0	1	1	0	0	4	4
93	No	-	6/13/2014	AA05 - unknown	1	0	1	0	0	0	0
94	No	-	6/13/2014	DH98 - unknown	0	1	1	0	0	0	0
Sub-Total for 06/13/2014					1	1	2	0	0	0	0
95	No	-	6/16/2014	HELO - Helicoper	0	1	1	0	0	4	4
96	No	-	7/6/2014	-1 - unknown	1	0	1	0	0	0	0
97	No	-	8/9/2014	AG5 - Tiger AG-5	1	0	1	2	2	0	0
98	No	-	8/15/2014	PCUB - unknown	0	1	1	0	0	0	0
99	No	-	8/19/2014	-1 - unknown	1	0	1	0	0	0	0
100	No	-	9/7/2014	UH60 - Blackhawk Helicopter	0	1	1	0	0	4	4
101	No	-	9/23/2014	AA5T - unknown	1	0	1	0	0	0	0
102	No	-	9/26/2014	EXP - McDonnell MD-902 Explorer	1	0	1	7	7	0	0
103	No	-	10/23/2014	HEKI - unknown	0	1	1	0	0	0	0
Sub-Total for -					64	50	114	118	1	322	6
104	No	Jet	1/14/2010	-1 - unknown	1	1	2	0	0	0	0
105	No	Jet	1/16/2010	C82 - Fairchild F-78 Packet	1	1	2	0	0	0	0
106	No	Jet	2/4/2010	-1 - unknown	1	0	1	0	0	0	0
107	No	Jet	2/20/2010	-1 - unknown	1	0	1	0	0	0	0
108	No	Jet	2/21/2010	-1 - unknown	1	0	1	0	0	0	0
109	No	Jet	3/5/2010	-1 - unknown	0	1	1	0	0	0	0
110	No	Jet	3/6/2010	-1 - unknown	1	0	1	0	0	0	0
111	No	Jet	3/9/2010	-1 - unknown	1	1	2	0	0	0	0
112	No	Jet	3/11/2010	-1 - unknown	0	1	1	0	0	0	0
113	No	Jet	3/17/2010	-1 - unknown	1	0	1	0	0	0	0
114	No	Jet	3/18/2010	-1 - unknown	0	1	1	0	0	0	0
115	No	Jet	3/19/2010	-1 - unknown	2	1	3	0	0	0	0
116	No	Jet	3/26/2010	-1 - unknown	2	0	2	0	0	0	0
117	No	Jet	3/31/2010	-1 - unknown	0	1	1	0	0	0	0
118	No	Jet	4/1/2010	-1 - unknown	1	1	2	0	0	0	0
119	No	Jet	4/2/2010	-1 - unknown	1	0	1	0	0	0	0
Sub-Total for -1 - unknown					12	7	19	0	0	0	0
120	No	Jet	4/9/2010	VELO - Velocity	1	0	1	4	4	0	0
121	No	Jet	4/11/2010	-1 - unknown	0	1	1	0	0	0	0
122	No	Jet	4/12/2010	-1 - unknown	1	0	1	0	0	0	0
123	No	Jet	4/15/2010	-1 - unknown	0	1	1	0	0	0	0
124	No	Jet	4/19/2010	-1 - unknown	0	1	1	0	0	0	0
125	No	Jet	4/20/2010	-1 - unknown	0	1	1	0	0	0	0
126	No	Jet	4/21/2010	-1 - unknown	1	0	1	0	0	0	0
127	No	Jet	4/23/2010	-1 - unknown	1	0	1	0	0	0	0
128	No	Jet	4/27/2010	-1 - unknown	1	1	2	0	0	0	0
129	No	Jet	4/30/2010	-1 - unknown	1	2	3	0	0	0	0
130	No	Jet	5/15/2010	-1 - unknown	1	0	1	0	0	0	0
131	No	Jet	5/19/2010	-1 - unknown	0	1	1	0	0	0	0
132	No	Jet	5/20/2010	-1 - unknown	0	2	2	0	0	0	0
133	No	Jet	5/21/2010	-1 - unknown	0	2	2	0	0	0	0
134	No	Jet	5/23/2010	-1 - unknown	1	0	1	0	0	0	0
135	No	Jet	5/24/2010	-1 - unknown	0	1	1	0	0	0	0
136	No	Jet	5/25/2010	-1 - unknown	1	0	1	0	0	0	0
137	No	Jet	5/26/2010	-1 - unknown	1	1	2	0	0	0	0
138	No	Jet	5/29/2010	-1 - unknown	0	2	2	0	0	0	0
139	No	Jet	6/10/2010	-1 - unknown	1	1	2	0	0	0	0
Sub-Total for -1 - unknown					10	17	27	0	0	0	0

140	No	Jet	6/10/2010	LJ40 - Learjet 40; Gates Learjet	1	1	2	10	10	10	10
141	No	Jet	6/10/2010	NAV - North American U-18 Navion	0	1	1	0	0	0	0
Sub-Total for 06/10/2010					2	3	5	10	5	10	3
142	No	Jet	6/11/2010	-1 - unknown	2	0	2	0	0	0	0
143	No	Jet	6/17/2010	-1 - unknown	0	1	1	0	0	0	0
144	No	Jet	6/21/2010	-1 - unknown	0	1	1	0	0	0	0
Sub-Total for -1 - unknown					2	2	4	0	0	0	0
145	No	Jet	6/21/2010	SPRT - Sport Aircraft	0	1	1	0	0	0	0
Sub-Total for 06/21/2010					0	2	2	0	0	0	0
146	No	Jet	6/24/2010	-1 - unknown	1	0	1	0	0	0	0
147	No	Jet	7/1/2010	-1 - unknown	0	1	1	0	0	0	0
148	No	Jet	7/5/2010	-1 - unknown	1	0	1	0	0	0	0
Sub-Total for -1 - unknown					2	1	3	0	0	0	0
149	No	Jet	7/10/2010	EXXP - Experimental Aircraft	1	0	1	0	0	0	0
150	No	Jet	7/17/2010	-1 - unknown	1	1	2	0	0	0	0
151	No	Jet	7/17/2010	AS65 - Aérospatiale AS-366	1	0	1	4	4	0	0
Sub-Total for 07/17/2010					2	1	3	4	2	0	0
152	No	Jet	7/19/2010	-1 - unknown	0	1	1	0	0	0	0
153	No	Jet	7/29/2010	-1 - unknown	0	1	1	0	0	0	0
Sub-Total for -1 - unknown					0	2	2	0	0	0	0
154	No	Jet	8/1/2010	EXP - McDonnell MD-902 Explorer	0	1	1	0	0	7	7
155	No	Jet	8/3/2010	-1 - unknown	1	1	2	0	0	0	0
156	No	Jet	8/4/2010	-1 - unknown	1	0	1	0	0	0	0
157	No	Jet	8/6/2010	-1 - unknown	0	1	1	0	0	0	0
Sub-Total for -1 - unknown					2	2	4	0	0	0	0
158	No	Jet	8/6/2010	LJ40 - Learjet 40; Gates Learjet	1	1	2	10	10	10	10
Sub-Total for 08/06/2010					1	2	3	10	10	10	5
159	No	Jet	8/7/2010	-1 - unknown	1	0	1	0	0	0	0
160	No	Jet	8/8/2010	-1 - unknown	0	1	1	0	0	0	0
Sub-Total for -1 - unknown					1	1	2	0	0	0	0
161	No	Jet	8/10/2010	A320 - Airbus A320 All Series	0	1	1	0	0	153	153
162	No	Jet	8/11/2010	-1 - unknown	0	1	1	0	0	0	0
163	No	Jet	8/19/2010	-1 - unknown	0	1	1	0	0	0	0
Sub-Total for -1 - unknown					0	2	2	0	0	0	0
164	No	Jet	1/22/2011	B737 - Boeing 737-700	0	1	1	0	0	126	126
165	No	Jet	8/15/2011	LJ40 - Learjet 40; Gates Learjet	1	1	2	10	10	10	10
166	No	Jet	6/21/2012	F16 - Lockheed F-16 Fighting Falcon	2	0	2	2	1	0	0
167	No	Jet	10/10/2013	C25C - Cessna Citation CJ4	2	2	4	0	0	0	0
168	No	Jet	11/15/2013	LJ40 - Learjet 40; Gates Learjet	1	1	2	10	10	10	10
169	No	Jet	4/4/2014	LJ40 - Learjet 40; Gates Learjet	0	1	1	0	0	10	10
170	No	Jet	4/6/2014	LJ40 - Learjet 40; Gates Learjet	1	0	1	10	10	0	0
Sub-Total for LJ40 - Learjet 40; Gates Learjet					2	2	4	20	10	20	10
171	No	Jet	4/11/2014	C25C - Cessna Citation CJ4	1	1	2	0	0	0	0
172	No	Jet	6/16/2014	C25C - Cessna Citation CJ4	1	1	2	0	0	0	0
Sub-Total for C25C - Cessna Citation CJ4					2	2	4	0	0	0	0
173	No	Jet	8/4/2014	DA20 - Diamond DA 20	0	1	1	0	0	2	2
174	No	Jet	8/30/2014	C25C - Cessna Citation CJ4	1	0	1	0	0	0	0
175	No	Jet	9/27/2014	C25C - Cessna Citation CJ4	0	1	1	0	0	0	0
Sub-Total for C25C - Cessna Citation CJ4					1	1	2	0	0	0	0
176	No	Jet	10/7/2014	C50 - unknown	1	0	1	6	6	0	0
177	No	Jet	12/10/2014	C25C - Cessna Citation CJ4	1	1	2	0	0	0	0
178	No	Jet	12/11/2014	C25C - Cessna Citation CJ4	1	1	2	0	0	0	0
Sub-Total for C25C - Cessna Citation CJ4					2	2	4	0	0	0	0
Sub-Total for Jet					50	55	105	66	1	338	6

179	No	Piston	1/10/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
180	No	Piston	1/14/2010	C182 - Cessna Skylane 182	0	3	3	0	0	12	4
Sub-Total for C182 - Cessna Skylane 182					1	3	4	4	4	12	4
181	No	Piston	1/14/2010	MO20 - Mooney M-20	0	1	1	0	0	4	4
Sub-Total for 01/14/2010					0	4	4	0	0	16	4
182	No	Piston	1/18/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
183	No	Piston	1/22/2010	C182 - Cessna Skylane 182	1	1	2	4	4	4	4
Sub-Total for C182 - Cessna Skylane 182					2	1	3	8	4	4	4
184	No	Piston	1/22/2010	PA28 - Piper Cherokee	0	1	1	0	0	28	28
Sub-Total for 01/22/2010					1	2	3	4	4	32	16
185	No	Piston	1/23/2010	C172 - Cessna Skyhawk 172/Cutlass	1	3	4	4	4	12	4
186	No	Piston	1/23/2010	MO20 - Mooney M-20	0	1	1	0	0	4	4
Sub-Total for 01/23/2010					1	4	5	4	4	16	4
187	No	Piston	1/28/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
188	No	Piston	1/29/2010	C172 - Cessna Skyhawk 172/Cutlass	2	2	4	8	4	8	4
189	No	Piston	2/1/2010	C182 - Cessna Skylane 182	2	2	4	8	4	8	4
190	No	Piston	2/2/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
191	No	Piston	2/7/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
192	No	Piston	2/8/2010	PA30 - Piper PA-30	1	1	2	6	6	6	6
193	No	Piston	2/11/2010	C172 - Cessna Skyhawk 172/Cutlass	2	2	4	8	4	8	4
194	No	Piston	2/11/2010	PA32 - Piper Cherokee Six	1	1	2	6	6	6	6
Sub-Total for 02/11/2010					3	3	6	14	4	14	4
195	No	Piston	2/19/2010	C82R - Cessna Skylane RG	0	1	1	0	0	4	4
196	No	Piston	2/20/2010	C182 - Cessna Skylane 182	1	1	2	4	4	4	4
197	No	Piston	2/20/2010	PA23 - Piper PA-23	1	0	1	5	5	0	0
Sub-Total for 02/20/2010					2	1	3	9	4	4	4
198	No	Piston	2/21/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
199	No	Piston	2/21/2010	M20P - Mooney M-20C Ranger	0	1	1	0	0	4	4
200	No	Piston	2/21/2010	P28R - Cherokee Arrow/Turbo	0	1	1	0	0	4	4
Sub-Total for 02/21/2010					0	3	3	0	0	12	4
201	No	Piston	3/1/2010	P210 - Riley Super P210	1	1	2	6	6	6	6
202	No	Piston	3/4/2010	AC11 - North American Commander 112	1	0	1	4	4	0	0
203	No	Piston	3/4/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
204	No	Piston	3/4/2010	M20P - Mooney M-20C Ranger	1	1	2	4	4	4	4
Sub-Total for 03/04/2010					2	2	4	8	4	8	4
205	No	Piston	3/6/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
206	No	Piston	3/8/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
207	No	Piston	3/9/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
208	No	Piston	3/10/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					1	4	5	4	4	16	4
209	No	Piston	3/10/2010	PA32 - Piper Cherokee Six	1	1	2	6	6	6	6
Sub-Total for 03/10/2010					1	2	3	6	6	10	5
210	No	Piston	3/11/2010	C172 - Cessna Skyhawk 172/Cutlass	1	3	4	4	4	12	4
211	No	Piston	3/16/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					2	4	6	8	4	16	4
212	No	Piston	3/17/2010	AC11 - North American Commander 112	0	1	1	0	0	4	4
213	No	Piston	3/17/2010	PA28 - Piper Cherokee	1	1	2	28	28	28	28
Sub-Total for 03/17/2010					1	2	3	28	28	32	16
214	No	Piston	3/18/2010	BE76 - Beech 76 Duchess	1	0	1	4	4	0	0
215	No	Piston	3/18/2010	PA28 - Piper Cherokee	0	1	1	0	0	28	28
Sub-Total for 03/18/2010					1	1	2	4	4	28	28
216	No	Piston	3/19/2010	P28A - Piper Cherokee	1	1	2	4	4	4	4
217	No	Piston	3/20/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
218	No	Piston	3/25/2010	M20P - Mooney M-20C Ranger	0	1	1	0	0	4	4

219	No	Piston	3/27/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
220	No	Piston	3/28/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
Sub-Total for C182 - Cessna Skylane 182					1	1	2	4	4	4	4
221	No	Piston	3/30/2010	AA5 - American AA-5 Traveler	0	1	1	0	0	3	3
222	No	Piston	4/1/2010	P28A - Piper Cherokee	0	1	1	0	0	4	4
223	No	Piston	4/2/2010	C172 - Cessna Skyhawk 172/Cutlass	1	3	4	4	4	12	4
224	No	Piston	4/2/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
Sub-Total for 04/02/2010					2	3	5	8	4	12	4
225	No	Piston	4/3/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
226	No	Piston	4/4/2010	AA5B - American Traveler	0	1	1	0	0	4	4
227	No	Piston	4/4/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
228	No	Piston	4/4/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
Sub-Total for 04/04/2010					1	2	3	4	4	8	4
229	No	Piston	4/5/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
Sub-Total for C182 - Cessna Skylane 182					1	1	2	4	4	4	4
230	No	Piston	4/6/2010	AA5B - American Traveler	1	0	1	4	4	0	0
231	No	Piston	4/6/2010	C172 - Cessna Skyhawk 172/Cutlass	2	0	2	8	4	0	0
Sub-Total for 04/06/2010					3	0	3	12	4	0	0
232	No	Piston	4/8/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					3	1	4	12	4	4	4
233	No	Piston	4/10/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
234	No	Piston	4/11/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
235	No	Piston	4/12/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
Sub-Total for C182 - Cessna Skylane 182					2	1	3	8	4	4	4
236	No	Piston	4/13/2010	C172 - Cessna Skyhawk 172/Cutlass	2	1	3	8	4	4	4
237	No	Piston	4/19/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					3	2	5	12	4	8	4
238	No	Piston	4/19/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
Sub-Total for 04/19/2010					1	2	3	4	4	8	4
239	No	Piston	4/20/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
240	No	Piston	4/20/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
241	No	Piston	4/20/2010	C82R - Cessna Skylane RG	0	1	1	0	0	4	4
Sub-Total for 04/20/2010					1	3	4	4	4	12	4
242	No	Piston	4/21/2010	P32R - Piper 32	1	1	2	4	4	4	4
243	No	Piston	4/23/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
244	No	Piston	4/29/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
245	No	Piston	4/30/2010	C172 - Cessna Skyhawk 172/Cutlass	2	3	5	8	4	12	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					3	3	6	12	4	12	4
246	No	Piston	5/1/2010	PA28 - Piper Cherokee	1	1	2	28	28	28	28
247	No	Piston	5/4/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
248	No	Piston	5/7/2010	BE36 - Beech Bonanza 36	1	0	1	4	4	0	0
249	No	Piston	5/10/2010	BE76 - Beech 76 Duchess	1	0	1	4	4	0	0
250	No	Piston	5/10/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
Sub-Total for 05/10/2010					1	1	2	4	4	4	4
251	No	Piston	5/14/2010	C182 - Cessna Skylane 182	1	1	2	4	4	4	4
252	No	Piston	5/15/2010	C185 - Cessna Skywagon 185	1	1	2	6	6	6	6
253	No	Piston	5/15/2010	M20P - Mooney M-20C Ranger	1	1	2	4	4	4	4
Sub-Total for 05/15/2010					2	2	4	10	5	10	5
254	No	Piston	5/17/2010	BE76 - Beech 76 Duchess	1	1	2	4	4	4	4
255	No	Piston	5/17/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
256	No	Piston	5/17/2010	P28A - Piper Cherokee	0	1	1	0	0	4	4
Sub-Total for 05/17/2010					1	3	4	4	4	12	4
257	No	Piston	5/20/2010	C150 - Cessna 150	0	1	1	0	0	2	2
258	No	Piston	5/20/2010	C152 - Cessna 152	1	0	1	4	4	0	0

259	No	Piston	5/20/2010	C172 - Cessna Skyhawk 172/Cutlass	0	2	2	0	0	8	4
260	No	Piston	5/20/2010	M4 - Maule M-4	1	1	2	4	4	4	4
Sub-Total for 05/20/2010					2	4	6	8	4	14	3
261	No	Piston	5/21/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
262	No	Piston	5/22/2010	C177 - Cessna 177 Cardinal	1	0	1	4	4	0	0
263	No	Piston	5/22/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
Sub-Total for 05/22/2010					2	0	2	8	4	0	0
264	No	Piston	5/25/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
265	No	Piston	5/25/2010	P28A - Piper Cherokee	0	1	1	0	0	4	4
Sub-Total for 05/25/2010					0	2	2	0	0	8	4
266	No	Piston	5/26/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
267	No	Piston	5/26/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
Sub-Total for 05/26/2010					1	1	2	4	4	4	4
268	No	Piston	5/27/2010	C172 - Cessna Skyhawk 172/Cutlass	1	2	3	4	4	8	4
269	No	Piston	5/29/2010	PA32 - Piper Cherokee Six	0	1	1	0	0	6	6
270	No	Piston	5/30/2010	BE35 - Beech Bonanza 35	0	1	1	0	0	4	4
271	No	Piston	5/30/2010	PA32 - Piper Cherokee Six	1	0	1	6	6	0	0
Sub-Total for 05/30/2010					1	1	2	6	6	4	4
272	No	Piston	6/2/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
273	No	Piston	6/3/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
274	No	Piston	6/5/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
275	No	Piston	6/7/2010	C172 - Cessna Skyhawk 172/Cutlass	3	0	3	12	4	0	0
276	No	Piston	6/8/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
277	No	Piston	6/10/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
278	No	Piston	6/11/2010	C172 - Cessna Skyhawk 172/Cutlass	1	2	3	4	4	8	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					7	6	13	28	4	24	4
279	No	Piston	6/12/2010	C182 - Cessna Skylane 182	2	0	2	8	4	0	0
280	No	Piston	6/12/2010	C72R - Cessna Cutlass RG	1	1	2	4	4	4	4
Sub-Total for 06/12/2010					3	1	4	12	4	4	4
281	No	Piston	6/13/2010	C182 - Cessna Skylane 182	0	2	2	0	0	8	4
282	No	Piston	6/14/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
283	No	Piston	6/15/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
284	No	Piston	6/17/2010	P28A - Piper Cherokee	0	1	1	0	0	4	4
285	No	Piston	6/18/2010	BE36 - Beech Bonanza 36	1	1	2	4	4	4	4
286	No	Piston	6/18/2010	C182 - Cessna Skylane 182	3	0	3	12	4	0	0
Sub-Total for 06/18/2010					4	1	5	16	4	4	4
287	No	Piston	6/19/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
288	No	Piston	6/21/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					1	2	3	4	4	8	4
289	No	Piston	6/23/2010	P28A - Piper Cherokee	0	1	1	0	0	4	4
290	No	Piston	6/24/2010	C172 - Cessna Skyhawk 172/Cutlass	2	1	3	8	4	4	4
291	No	Piston	6/25/2010	C172 - Cessna Skyhawk 172/Cutlass	1	5	6	4	4	20	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					3	6	9	12	4	24	4
292	No	Piston	6/25/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
Sub-Total for 06/25/2010					2	5	7	8	4	20	4
293	No	Piston	6/26/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
294	No	Piston	6/29/2010	C172 - Cessna Skyhawk 172/Cutlass	1	2	3	4	4	8	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					2	3	5	8	4	12	4
295	No	Piston	6/29/2010	P28A - Piper Cherokee	0	1	1	0	0	4	4
Sub-Total for 06/29/2010					1	3	4	4	4	12	4
296	No	Piston	6/30/2010	P28A - Piper Cherokee	0	1	1	0	0	4	4
Sub-Total for P28A - Piper Cherokee					0	2	2	0	0	8	4
297	No	Piston	7/1/2010	MO20 - Mooney M-20	1	0	1	4	4	0	0
298	No	Piston	7/1/2010	P28R - Cherokee Arrow/Turbo	1	0	1	4	4	0	0

299	No	Piston	7/1/2010	PA28 - Piper Cherokee	0	1	1	0	0	28	28
300	No	Piston	7/1/2010	PA32 - Piper Cherokee Six	0	1	1	0	0	6	6
Sub-Total for 07/01/2010					2	2	4	8	4	34	17
301	No	Piston	7/2/2010	BE35 - Beech Bonanza 35	0	1	1	0	0	4	4
302	No	Piston	7/2/2010	C182 - Cessna Skylane 182	1	1	2	4	4	4	4
303	No	Piston	7/2/2010	PARO - Piper Cherokee Arrow	1	0	1	4	4	0	0
Sub-Total for 07/02/2010					2	2	4	8	4	8	4
304	No	Piston	7/3/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
305	No	Piston	7/4/2010	BE33 - Beech Bonanza 33	0	1	1	0	0	5	5
306	No	Piston	7/4/2010	BE36 - Beech Bonanza 36	0	1	1	0	0	4	4
307	No	Piston	7/4/2010	PA32 - Piper Cherokee Six	1	0	1	6	6	0	0
Sub-Total for 07/04/2010					1	2	3	6	6	9	4
308	No	Piston	7/5/2010	BE36 - Beech Bonanza 36	1	0	1	4	4	0	0
309	No	Piston	7/5/2010	C172 - Cessna Skyhawk 172/Cutlass	2	1	3	8	4	4	4
Sub-Total for 07/05/2010					3	1	4	12	4	4	4
310	No	Piston	7/10/2010	BE35 - Beech Bonanza 35	1	0	1	4	4	0	0
311	No	Piston	7/10/2010	MO20 - Mooney M-20	1	0	1	4	4	0	0
312	No	Piston	7/10/2010	PA28 - Piper Cherokee	1	0	1	28	28	0	0
Sub-Total for 07/10/2010					3	0	3	36	12	0	0
313	No	Piston	7/11/2010	BE36 - Beech Bonanza 36	1	1	2	4	4	4	4
314	No	Piston	7/11/2010	P28A - Piper Cherokee	1	0	1	4	4	0	0
315	No	Piston	7/11/2010	PA28 - Piper Cherokee	1	0	1	28	28	0	0
Sub-Total for 07/11/2010					3	1	4	36	12	4	4
316	No	Piston	7/12/2010	AA5 - American AA-5 Traveler	0	1	1	0	0	3	3
317	No	Piston	7/12/2010	P28A - Piper Cherokee	0	1	1	0	0	4	4
Sub-Total for 07/12/2010					0	2	2	0	0	7	3
318	No	Piston	7/14/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
319	No	Piston	7/15/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					2	1	3	8	4	4	4
320	No	Piston	7/15/2010	C182 - Cessna Skylane 182	1	1	2	4	4	4	4
Sub-Total for 07/15/2010					2	2	4	8	4	8	4
321	No	Piston	7/17/2010	BE36 - Beech Bonanza 36	1	1	2	4	4	4	4
322	No	Piston	7/17/2010	PA28 - Piper Cherokee	1	0	1	28	28	0	0
323	No	Piston	7/17/2010	PARO - Piper Cherokee Arrow	1	0	1	4	4	0	0
Sub-Total for 07/17/2010					3	1	4	36	12	4	4
324	No	Piston	7/19/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
325	No	Piston	7/19/2010	P28R - Cherokee Arrow/Turbo	0	1	1	0	0	4	4
326	No	Piston	7/19/2010	PA27 - Piper Aztec	1	0	1	4	4	0	0
Sub-Total for 07/19/2010					2	2	4	8	4	8	4
327	No	Piston	7/20/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
328	No	Piston	7/21/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					2	2	4	8	4	8	4
329	No	Piston	7/21/2010	DG15 - Howard DGA-15	0	1	1	0	0	4	4
Sub-Total for 07/21/2010					1	2	3	4	4	8	4
330	No	Piston	7/22/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
331	No	Piston	7/24/2010	C82R - Cessna Skylane RG	1	0	1	4	4	0	0
332	No	Piston	7/25/2010	AA5 - American AA-5 Traveler	0	1	1	0	0	3	3
333	No	Piston	7/25/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
Sub-Total for 07/25/2010					1	1	2	4	4	3	3
334	No	Piston	7/26/2010	AA5 - American AA-5 Traveler	1	1	2	3	3	3	3
335	No	Piston	7/27/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
336	No	Piston	7/28/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
337	No	Piston	7/29/2010	AA5 - American AA-5 Traveler	1	1	2	3	3	3	3
338	No	Piston	7/29/2010	BE95 - Beech 95 Travel Air	1	0	1	4	4	0	0

339	No	Piston	7/29/2010	C152 - Cessna 152	0	1	1	0	0	4	4
340	No	Piston	7/29/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
Sub-Total for 07/29/2010					3	2	5	11	3	7	3
341	No	Piston	7/30/2010	BE24 - Beech 24 Sierra	1	0	1	6	6	0	0
342	No	Piston	7/30/2010	PA28 - Piper Cherokee	1	0	1	28	28	0	0
Sub-Total for 07/30/2010					2	0	2	34	17	0	0
343	No	Piston	7/31/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
344	No	Piston	7/31/2010	P28A - Piper Cherokee	1	1	2	4	4	4	4
Sub-Total for 07/31/2010					2	2	4	8	4	8	4
345	No	Piston	8/1/2010	PA28 - Piper Cherokee	0	1	1	0	0	28	28
346	No	Piston	8/2/2010	C172 - Cessna Skyhawk 172/Cutlass	3	2	5	12	4	8	4
347	No	Piston	8/3/2010	BE36 - Beech Bonanza 36	0	1	1	0	0	4	4
348	No	Piston	8/4/2010	AA5 - American AA-5 Traveler	0	1	1	0	0	3	3
349	No	Piston	8/4/2010	P28A - Piper Cherokee	1	1	2	4	4	4	4
Sub-Total for 08/04/2010					1	2	3	4	4	7	3
350	No	Piston	8/6/2010	AC11 - North American Commander 112	0	1	1	0	0	4	4
351	No	Piston	8/6/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
352	No	Piston	8/6/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
353	No	Piston	8/6/2010	P32R - Piper 32	1	1	2	4	4	4	4
Sub-Total for 08/06/2010					2	3	5	8	4	12	4
354	No	Piston	8/7/2010	P28A - Piper Cherokee	1	0	1	4	4	0	0
355	No	Piston	8/8/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
356	No	Piston	8/9/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
357	No	Piston	8/10/2010	C172 - Cessna Skyhawk 172/Cutlass	1	2	3	4	4	8	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					1	3	4	4	4	12	4
358	No	Piston	8/11/2010	BE36 - Beech Bonanza 36	1	2	3	4	4	8	4
359	No	Piston	8/18/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
360	No	Piston	8/19/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					0	2	2	0	0	8	4
361	No	Piston	8/19/2010	PA30 - Piper PA-30	1	1	2	6	6	6	6
Sub-Total for 08/19/2010					1	2	3	6	6	10	5
362	No	Piston	8/20/2010	C172 - Cessna Skyhawk 172/Cutlass	1	2	3	4	4	8	4
363	No	Piston	8/22/2010	C172 - Cessna Skyhawk 172/Cutlass	0	2	2	0	0	8	4
364	No	Piston	8/23/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
365	No	Piston	8/24/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
366	No	Piston	8/26/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					3	6	9	12	4	24	4
367	No	Piston	8/26/2010	M20P - Mooney M-20C Ranger	0	1	1	0	0	4	4
Sub-Total for 08/26/2010					0	2	2	0	0	8	4
368	No	Piston	8/27/2010	AA5 - American AA-5 Traveler	0	1	1	0	0	3	3
369	No	Piston	8/27/2010	C152 - Cessna 152	0	1	1	0	0	4	4
Sub-Total for 08/27/2010					0	2	2	0	0	7	3
370	No	Piston	8/28/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
371	No	Piston	8/29/2010	C150 - Cessna 150	1	0	1	2	2	0	0
372	No	Piston	8/29/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
373	No	Piston	8/29/2010	PA24 - Piper PA-24	1	0	1	5	5	0	0
Sub-Total for 08/29/2010					2	1	3	7	3	4	4
374	No	Piston	8/30/2010	AA5 - American AA-5 Traveler	1	0	1	3	3	0	0
375	No	Piston	8/30/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
376	No	Piston	8/30/2010	C82R - Cessna Skylane RG	0	1	1	0	0	4	4
Sub-Total for 08/30/2010					1	2	3	3	3	8	4
377	No	Piston	8/31/2010	C82R - Cessna Skylane RG	1	0	1	4	4	0	0
Sub-Total for C82R - Cessna Skylane RG					1	1	2	4	4	4	4
378	No	Piston	8/31/2010	M20P - Mooney M-20C Ranger	1	0	1	4	4	0	0

Sub-Total for 08/31/2010					2	0	2	8	4	0	0
379	No	Piston	9/1/2010	BE36 - Beech Bonanza 36	0	1	1	0	0	4	4
380	No	Piston	9/2/2010	PA23 - Piper PA-23	1	1	2	5	5	5	5
381	No	Piston	9/3/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
382	No	Piston	9/5/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
Sub-Total for C182 - Cessna Skylane 182					1	1	2	4	4	4	4
383	No	Piston	9/5/2010	M20P - Mooney M-20C Ranger	0	1	1	0	0	4	4
384	No	Piston	9/5/2010	PA32 - Piper Cherokee Six	0	1	1	0	0	6	6
Sub-Total for 09/05/2010					0	3	3	0	0	14	4
385	No	Piston	9/6/2010	BE36 - Beech Bonanza 36	1	0	1	4	4	0	0
386	No	Piston	9/6/2010	PA32 - Piper Cherokee Six	1	0	1	6	6	0	0
Sub-Total for 09/06/2010					2	0	2	10	5	0	0
387	No	Piston	9/7/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
388	No	Piston	9/10/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					2	1	3	8	4	4	4
389	No	Piston	9/10/2010	MO20 - Mooney M-20	0	2	2	0	0	8	4
390	No	Piston	9/10/2010	PA28 - Piper Cherokee	0	2	2	0	0	56	28
Sub-Total for 09/10/2010					1	5	6	4	4	68	13
391	No	Piston	9/11/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
392	No	Piston	9/11/2010	MO20 - Mooney M-20	0	4	4	0	0	16	4
393	No	Piston	9/11/2010	PA28 - Piper Cherokee	0	1	1	0	0	28	28
Sub-Total for 09/11/2010					0	6	6	0	0	48	8
394	No	Piston	9/15/2010	AC11 - North American Commander 112	1	1	2	4	4	4	4
395	No	Piston	9/15/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
Sub-Total for 09/15/2010					1	2	3	4	4	8	4
396	No	Piston	9/16/2010	PA30 - Piper PA-30	0	1	1	0	0	6	6
397	No	Piston	9/17/2010	BE33 - Beech Bonanza 33	1	1	2	5	5	5	5
398	No	Piston	9/18/2010	AA5 - American AA-5 Traveler	0	1	1	0	0	3	3
399	No	Piston	9/18/2010	C152 - Cessna 152	2	0	2	8	4	0	0
400	No	Piston	9/18/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
401	No	Piston	9/18/2010	C182 - Cessna Skylane 182	0	1	1	0	0	4	4
402	No	Piston	9/18/2010	P28A - Piper Cherokee	0	2	2	0	0	8	4
Sub-Total for 09/18/2010					2	5	7	8	4	19	3
403	No	Piston	9/19/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
404	No	Piston	9/21/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					2	1	3	8	4	4	4
405	No	Piston	9/22/2010	BE36 - Beech Bonanza 36	0	1	1	0	0	4	4
406	No	Piston	9/23/2010	BE36 - Beech Bonanza 36	0	1	1	0	0	4	4
Sub-Total for BE36 - Beech Bonanza 36					0	2	2	0	0	8	4
407	No	Piston	9/23/2010	C182 - Cessna Skylane 182	1	0	1	4	4	0	0
Sub-Total for 09/23/2010					1	1	2	4	4	4	4
408	No	Piston	9/25/2010	C162 - Cessna 162 Skycatcher	0	1	1	0	0	0	0
409	No	Piston	9/26/2010	BE36 - Beech Bonanza 36	1	0	1	4	4	0	0
410	No	Piston	9/26/2010	CH7A - Aeronca 7AC Champion	1	0	1	2	2	0	0
Sub-Total for 09/26/2010					2	0	2	6	3	0	0
411	No	Piston	9/27/2010	P28A - Piper Cherokee	1	1	2	4	4	4	4
412	No	Piston	9/30/2010	C172 - Cessna Skyhawk 172/Cutlass	1	0	1	4	4	0	0
413	No	Piston	10/1/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
414	No	Piston	10/4/2010	C172 - Cessna Skyhawk 172/Cutlass	0	1	1	0	0	4	4
Sub-Total for C172 - Cessna Skyhawk 172/Cutlass					1	2	3	4	4	8	4
415	No	Piston	10/5/2010	BE18 - Beech 18	1	0	1	9	9	0	0
416	No	Piston	10/6/2010	C172 - Cessna Skyhawk 172/Cutlass	1	1	2	4	4	4	4
417	No	Piston	10/9/2010	BE35 - Beech Bonanza 35	1	0	1	4	4	0	0
418	No	Piston	10/9/2010	BE36 - Beech Bonanza 36	0	1	1	0	0	4	4