

CHAPTER SIX:

AIRPORT PLANS

6.1 INTRODUCTION

The future development plan for the Belfast Municipal Airport (the Airport or BST) has evolved through a progressive analysis in the Airport Master Plan Update that started with establishing a baseline of current data for the Airport, continued to the development of aviation demand forecasts that were translated into long-term Airport facility requirements, which then resulted in an alternatives analysis to establish an appropriate path for long-term Airport development. That future development plan then must be translated to the Airport Layout Plan (ALP) drawing set, which is a graphical depiction of the Airport's existing conditions including building facilities, pavements, airspace, and obstructions as well as proposed future development for the 20-year planning period. The ALP is intended to provide guidance for the Airport, federal, and state agencies, and consultants for short-term and long-term capital improvement projects at the Airport.

In this chapter, the various elements of the ALP set are categorically reviewed and detailed in summary and graphical formats. A brief written description of the individual elements represented in the BST ALP set is accompanied by a graphic description presented in the form of the following plan sheets:

- Title Sheet
- Exhibit 1 - Existing Airport Layout Plan
- Exhibit 2 - Ultimate Airport Layout Plan
- Exhibit 3 - Technical Data Sheet
- Exhibit 4 - Terminal Area Plan
- Exhibit 5 - Airport Airspace Drawing (Federal Aviation Regulations Part 77)
- Exhibit 6 - Inner Portion of the Approach Plan and Profile (Runway 15-33)
- Exhibit 7 - Off-Airport Land Use Plan

Note that the ALP drawings were prepared in compliance with Federal Aviation Administration (FAA) Standard Operating Procedure (SOP) 2.00, *Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALPs)*.

6.2 AIRPORT LAYOUT PLAN DRAWING SHEET DESCRIPTIONS

6.2.1 Title Sheet

This sheet provides general information such as project title, federal grant number, an index of drawings, Airport location and vicinity maps, and a plan set revision

block. There is also a signature box for approvals by local, state, and FAA representatives.

6.2.2 Exhibit 1 - Existing Airport Layout Plan

Exhibit 1 depicts the existing conditions at BST at the time of the current Airport Master Plan Update. Information such as the Airport's existing property boundary, pavement surfaces, a listing of Airport buildings, navigational aids, airspace, safety areas, aviation easements, and other FAA Advisory Circular 150/5300-13A, *Airport Design*, safety standards are shown as required by the FAA. Off-Airport local road and building infrastructure as well as general topography are also displayed. A legend, a list of abbreviations, and an inventory of airport facilities are included as tables on this sheet (as well as on Exhibit 4 below).

6.2.3 Exhibit 2 - Ultimate Airport Layout Plan

The ALP is a graphic depiction of existing and ultimate airport facilities that is required to enable the Airport to properly accommodate the forecasted future demand. In addition, the ALP also provides detailed information on both airport and runway design criteria that is necessary to define relationships with applicable standards. The following sections describe the major components of the future Airport development plan. It must be noted that inclusion of a future facility on the ALP sheet is neither an FAA endorsement nor a commitment of federal funding; it simply indicates that it is a potential future project that meets FAA airport design standards.

Runway System

The Airport's future runway configuration will be based around its existing Runway 15-33 throughout the 20-year planning period. Runway 15-33 is and will remain the Airport's primary runway. The Airport Master Plan Update recommended extending Runway 15-33's total pavement length from 4,000 feet to 5,010 feet (of which 4,710 feet will be usable for departures) to help facilitate operations by small- to mid-sized corporate aircraft. Its Runway Design Code over the planning period will continue to be B-II, with its width remaining at 100 feet to help compensate for the lack of a crosswind runway.

Lighting and Landing Aids

Medium Intensity Runway Lights will continue to serve Runway 15-33, as well as Runway End Indicator Lights at both ends of it. It is recommended that four-light Precision Approach Path Indicator lights be installed on both runway approach ends to aid visual approaches.

Taxiway System

BST currently has just a short partial parallel taxiway located too close to the runway. It is recommended that this parallel taxiway (Taxiway A) be relocated further away from the runway to meet current FAA design standards. Additionally, the relocated taxiway will also be ultimately extended to approach end of Runway

15 and nearly to the approach end of Runway 33. This extension is based on FAA recommendations to enhance general Airport operational safety. The future parallel taxiway will meet all FAA design standards for a Taxiway Design Group 1A (i.e., smaller aircraft), including being 25 feet wide, and will have its centerline 240 feet from the Runway 15-33 centerline. Taxiway A will maintain the existing taxiway stubs located midfield of the runway, and will be constructed with Medium Intensity Taxiway Lights. It should be noted that Taxiway A will be just short of the existing runway length (3,815 feet of taxiway versus 4,000 feet of existing runway) due to terrain and environmental conditions near the Runway 33 threshold end.

Landside Development

As discussed in previous chapters, the ALP also identifies various development areas for landside facilities, including additional hangars and non-aeronautical land uses on the Airport.

It should be noted that the Building Restriction Line reflected on the ALP has been established based on an assumed 30-foot clearance within the Part 77 transitional surface. At this clearance, there are existing and proposed hangar facilities that lie within the Building Restriction Line, although based on observational information, none of the existing facilities would appear to penetrate the Part 77 transitional surface. Nevertheless, it is recommended that when possible, the existing buildings’ heights be surveyed to confirm that they are clear of that airspace surface. Additionally, any new facility or hangar constructed on the Airport must file an FAA Form 7460-1 to ensure that they will remain clear of critical airspace surfaces.

Proposed Projects

The proposed facility-related projects specifically identified on the ALP and their anticipated times are reflected in the following tables.

Table 6-2: Proposed Project List

Short Term (0-5 Years)
Easement Acquisition and Phase I Tree Clearing (Runway 15)
Construct Partial Parallel Taxiway (2,020' x 25') and Bypass Taxiway; Install Supplemental Wind Cones
Install Automated Fuel Farm
Phase II Tree Clearing (Runway 33)
Mid- Term (6-10 Years)
Long-Term (11-20 Years)
Rehabilitate Runway 15-33
Extend/Construct Runway 33 Parallel Taxiway
Expand Hangar Development Area/T-Hangars
Install Precision Approach Path Indicator Lights on both Runway Ends
Extend Runway/Taxiway
Rehabilitate/Upgrade Terminal/Administration Building

Source: Airport Solutions Group.

It should be noted that this listing encompasses only those facility-related projects proposed for the Airport that can be included on the ALP. It does not include non-facility-related projects, such as planning studies, environmental studies, etc. A comprehensive listing of all projects proposed for the Airport is located in the following chapter.

6.2.4 Exhibit 3 - Technical Data Sheet

This exhibit includes an Airport Data Table, a Runway Data Table, a Wind Rose Data Table, a Modifications to Standards Approval Table, and a Declared Distances Table.

6.2.5 Exhibit 4 - Terminal Area Plan

This plan includes a large-scale plan of the proposed development within the existing terminal area. The plan depicts the location and configuration of the terminal/administration building, existing and proposed development including airfield pavements, hangars, and parking areas.

6.2.6 Exhibit 5 - Airport Airspace Drawing (Federal Aviation Regulation Part 77)

Exhibit 5 depicts the Airport Airspace based upon Federal Aviation Regulation Part 77, *Objects Affecting Navigable Airspace*. The FAA's sponsor grant assurances require the City of Belfast to protect the airspace defined in Federal Aviation Regulation Part 77. To protect the Airport's airspace and approaches from hazards that could affect the safe and efficient operation of aircraft, federal criteria contained in Federal Aviation Regulation Part 77 have been established to provide guidance in controlling the height of objects in the vicinity of airports. Federal Aviation Regulation Part 77 criteria specify a set of imaginary surfaces (including primary, approach, transitional, horizontal, and conical surfaces) which, when penetrated by an object, identify that object as an obstruction or hazard to air navigation. Those objects that penetrate the airspace are reflected in the exhibits that also show existing and proposed Part 77 Dimensional Criteria tables, an Off-Airport Obstruction Table, generic detail of Part 77 Surfaces, and a Legend. Also note that the plans are based on the ultimate planned runway length along with the ultimate planned approaches for each runway end to preserve and protect airspaces for those potential future projects.

6.2.7 Exhibit 6 - Inner Portion of the Approach Plan and Profile (Runway 15-33)

To provide a more detailed view of the inner portions of the Part 77 imaginary approach surfaces, the Threshold Siting Surfaces and the Runway Protection Zones, Inner Portion of the Approach Plan, and Profile exhibits are provided. Note that the Runway Protection Zones are land use planning zones within which it is desirable to clear all objects (although some uses are normally acceptable). The size of the Runway Protection Zone is a function of the design aircraft and the visibility minimums associated with the runway's instrument approach capabilities.

This exhibit provides a large-scale drawing with both plan and profile delineations. It is intended to facilitate the identification of roadways, utility lines, railroads, structures, and other possible obstructions that may lie within the confines of the inner approach surface area associated with each runway end. As with the other exhibits, these plans are based upon the ultimate planned runway length, along with the ultimate planned approaches to each runway. A table of obstructions and a key map are also included on each sheet.

6.2.8 Exhibit 7 - Off-Airport Land Use Plan

This exhibit depicts the land use proximate to the Airport and the surrounding area. The purpose of this plan is to provide guidance to local authorities for establishing appropriate land use zoning in the vicinity of the Airport. Land use information was taken from zoning maps obtained from the City of Belfast.

6.3 AIRPORT LAYOUT PLAN DRAWING SET

The following pages, although not to scale, are an 11" x 17" version of the ALP sheet set. The actual 24" x 36" scaled version of the ALP sheet set has been provided to the FAA, Maine Department of Transportation, Bureau of Planning, Aviation Program, and the City of Belfast for official approvals and signatures.

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BELFAST MUNICIPAL AIRPORT

BELFAST, MAINE

CADD FILE NO.	117-005 SHEET_COVER.dwg	
A.I.P. PROJECT NO.	3-23-0007-13-2014	
REV.	DATE	DESCRIPTION

FAA DISCLAIMER: THE PREPARATION OF THIS AIP SET HAS BEEN SUPPORTED, IN PART, THROUGH FINANCIAL ASSISTANCE FROM THE FEDERAL AVIATION ADMINISTRATION (FAA) AS PROVIDED UNDER TITLE 49 U.S.C., SECTION 47104. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS AIP SET BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE FEDERAL AVIATION ADMINISTRATION TO ENVIRONMENTALLY ACCEPTABLE OR WOULD HAVE JUSTIFICATION IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.



AIRPORT LAYOUT PLAN EXHIBITS	
EXHIBIT	TITLE
I	EXISTING AIRPORT LAYOUT PLAN
II	ULTIMATE AIRPORT LAYOUT PLAN
III	TECHNICAL DATA SHEET
IV	TERMINAL AREA PLAN
V	AIRPORT AIRSPACE DRAWING (14 CFR PART 77 SURFACE)
VI	INNER PORTION OF THE APPROACH PLAN AND PROFILE - RUNWAY 15-33
VII	OFF-AIRPORT LAND USE PLAN



AIP NO. 3-23-0007-13-2014
2016 AIRPORT MASTER PLAN UPDATE

SPONSORED BY:



CITY OF BELFAST, MAINE



MAINE DEPARTMENT OF TRANSPORTATION BUREAU OF PLANNING - AVIATION PROGRAM



FEDERAL AVIATION ADMINISTRATION

APPROVED BY: _____ CITY MANAGER _____ DATE: _____

APPROVED BY: _____ PLANNING AND PROGRAMING MANAGER _____ DATE: _____

APPROVED BY: _____ FAA PROJECT MANAGER _____ DATE: _____

PREPARED BY:



AIRPORT SOLUTIONS GROUP



INNOVATION BY DESIGN

PHONE (781) 491-0083 • FAX (781) 491-0360
AIRPORT CONSULTANTS BURLINGTON, MASSACHUSETTS

DATE AUGUST 2017

FACILITIES LIST

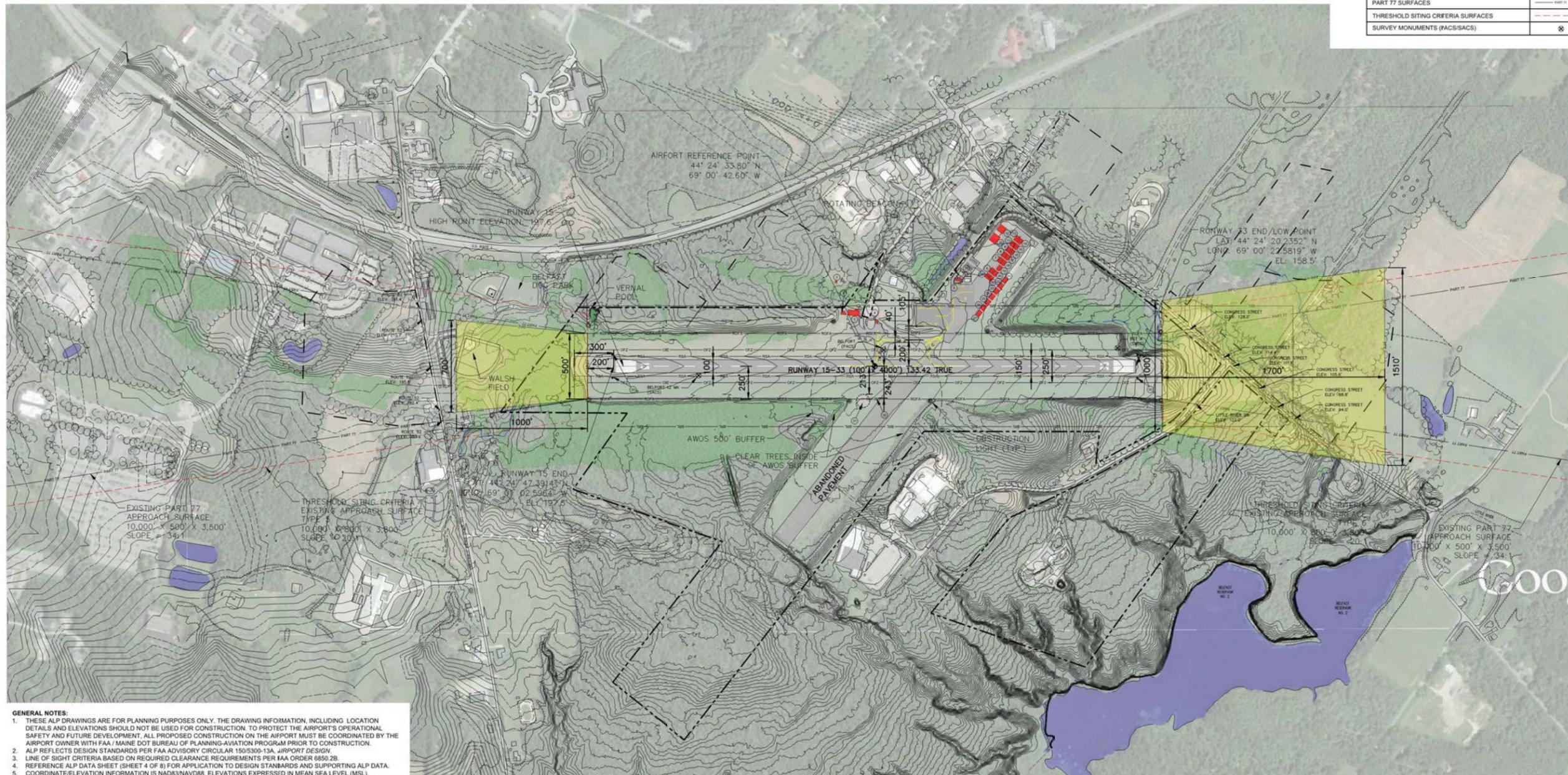
BLDG NO.	TYPE	OWNER
1	#	LOW HANGAR
2	#	HANGAR
3	#	NON-DIRECTIONAL BEACON
4	#	MAINT. STORAGE SHED
5	22	TERMINAL/ADMIN BUILDING
6	18-22	HANGAR
7	18-24	HANGAR
8	18-25	HANGAR
9	18-26	HANGAR
10	18-14	HANGAR
11	18-27	HANGAR
12	18-15	HANGAR
13	18-28	HANGAR
14	18-38	HANGAR
15	18-37	HANGAR
16	18-36	HANGAR
17	18-35	HANGAR

FACILITIES LIST

BLDG NO.	TYPE	OWNER
18	18-34	HANGAR
19	18-33	HANGAR
20	18-32	HANGAR
21	18-47	HANGAR
22	18-46	HANGAR
23	18-45	HANGAR
24	18-44	HANGAR
25	18-43	HANGAR
26	18-42	HANGAR
27	18-41	HANGAR
28	18-31	HANGAR
29	18-21	HANGAR
30	PRIVATE	REILS
31	PRIVATE	WIND CONE
32	PRIVATE	AVOS
33	PRIVATE	AIRFIELD ELECT. VAULT

LEGEND

TEM	SYMBOL
AIRPORT PROPERTY LINE	---
AIRPORT FENCE	---
RUNWAY SAFETY AREA (RSA)	---
OBSTACLE FREE ZONE (OFZ)	---
RUNWAY OBJECT FREE AREA (ROFA)	---
RUNWAY PROTECTION ZONE (RPZ)	---
AIRPORT REFERENCE POINT (ARP)	+
AIRPORT BUILDINGS	█
WETLAND	█
WATER BODY	█
STREAM	---
PAVEMENT	---
AIRPORT ROTATING BEACON	☆
AIRSPACE OBSTRUCTION LIGHT	⊙
TAXIWAY SAFETY AREA (TSA)	---
TAXIWAY OBJECT FREE AREA (TOFA)	---
BUILDING RESTRICTION LINE (BRL)	---
AVIGATION EASEMENT	---
PART 77 SURFACES	---
THRESHOLD SITING CRITERIA SURFACES	---
SURVEY MONUMENTS (FACS/SACS)	⊗



- GENERAL NOTES:**
1. THESE ALP DRAWINGS ARE FOR PLANNING PURPOSES ONLY. THE DRAWING INFORMATION, INCLUDING LOCATION DETAILS AND ELEVATIONS SHOULD NOT BE USED FOR CONSTRUCTION. TO PROTECT THE AIRPORT'S OPERATIONAL SAFETY AND FUTURE DEVELOPMENT, ALL PROPOSED CONSTRUCTION ON THE AIRPORT MUST BE COORDINATED BY THE AIRPORT OWNER WITH FAA / MAINE DOT BUREAU OF PLANNING-AVIATION PROGRAM PRIOR TO CONSTRUCTION.
 2. ALP REFLECTS DESIGN STANDARDS PER FAA ADVISORY CIRCULAR 150/5300-13A, AIRPORT DESIGN.
 3. LINE OF SIGHT CRITERIA BASED ON REQUIRED CLEARANCE REQUIREMENTS PER FAA ORDER 8850.2B.
 4. REFERENCE ALP DATA SHEET (SHEET 4 OF 8) FOR APPLICATION TO DESIGN STANDARDS AND SUPPORTING ALP DATA.
 5. COORDINATE/ELEVATION INFORMATION IS NAD83/NAVD88. ELEVATIONS EXPRESSED IN MEAN SEA LEVEL (MSL).
 6. THE BUILDING RESTRICTION LINE (BRL) IS SET BEYOND ALL APPLICABLE DESIGN STANDARDS AND IS ESTABLISHED TO PROVIDE 30' OBSTACLE CLEARANCE BASED ON PART 77 IMAGINARY SURFACES.
 7. AWOS PROTECTION AREA DEVELOPMENT LIMITED TO 15' BELOW THE WIND SENSORS ELEVATION WITHIN A 500' RADIUS, AND LIMITED TO 10' ABOVE THE WIND SENSOR ELEVATION BETWEEN A 500' TO 1.000' RADIUS.
 8. TRAVERSE ELEVATIONS SHOWN DO NOT INCLUDE THE TRAVERSE WAY ADJUSTMENT.
 9. VERNAL POOL DELINEATED BY NEWARTH ENVIRONMENTAL IN 2015.
 10. WETLAND DATA IS FROM NATIONAL WETLANDS INVENTORY (NWI).
 11. AERIAL IMAGERY FROM GOOGLE EARTH.
 12. CONTOURS FROM MAINE GIS.

CADD FILE NO. 117-005 SHEET.LAYOUT.dwg

A.I.P. PROJECT NO. 3-23-0007-13-2014

REV.	DATE	DESCRIPTION

AIRPORT SOLUTIONS GROUP
INNOVATION BY DESIGN
PHONE (781) 481-0083 FAX (781) 481-0360
AIRPORT CONSULTANTS • BURLINGTON, MASSACHUSETTS

BELFAST MUNICIPAL AIRPORT
LITTLE RIVER DRIVE
BELFAST, ME 04915
(207) 338-4736

SHEET TITLE

EXISTING AIRPORT LAYOUT PLAN

PROJECT

BELFAST MUNICIPAL AIRPORT
2016 AIRPORT MASTER PLAN UPDATE

DESIGNER: RAL

CADD TECH: JMT

APPROVED: CJW

AUGUST 2017

EXHIBIT I

SHEET 2 OF 8



FACILITIES LIST

EXISTING			
BLDG NO.	TYPE	OWNER	
1	#	LOW HANGAR	BST
2	#	HANGAR	BST
3	#	NON-DIRECTIONAL BEACON (R)	BST
4	#	MAINT. STORAGE SHED	BST
5	22	TERMINAL/ADMIN BUILDING	BST
6	18-22	HANGAR	PRIVATE
7	18-24	HANGAR	PRIVATE
8	18-25	HANGAR	PRIVATE
9	18-26	HANGAR	PRIVATE
10	18-14	HANGAR	PRIVATE
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13	18-28	HANGAR	PRIVATE
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15	18-37	HANGAR	PRIVATE
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18	18-34	HANGAR	PRIVATE
19	18-33	HANGAR	PRIVATE
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21	18-47	HANGAR	PRIVATE
22	18-46	HANGAR	PRIVATE
23	18-45	HANGAR	PRIVATE
24	18-44	HANGAR	PRIVATE
25	18-43	HANGAR	PRIVATE
26	18-42	HANGAR	PRIVATE
27	18-41	HANGAR	PRIVATE
28	18-31	HANGAR	PRIVATE
29	18-21	HANGAR	PRIVATE
30	PRIVATE	REILS (R)	BST
31	PRIVATE	WIND CONE	BST
32	PRIVATE	AWOS	THE LIFEFLIGHT FOUNDATION
33	PRIVATE	AIRFIELD ELECT. VAULT	BST

FACILITIES LIST

PROPOSED			
BLDG NO.	TYPE	OWNER	
34	PRIVATE	PAPIS	FAA
35	PRIVATE	REILS	FAA
36	PRIVATE	HANGAR	PRIVATE
37	PRIVATE	HANGAR	PRIVATE
38	PRIVATE	HANGAR	PRIVATE
39	PRIVATE	HANGAR	PRIVATE
40	PRIVATE	HANGAR	PRIVATE
41	PRIVATE	HANGAR	PRIVATE
42	PRIVATE	HANGAR	PRIVATE
43	PRIVATE	HANGAR	PRIVATE
44	PRIVATE	HANGAR	PRIVATE
45	PRIVATE	HANGAR	PRIVATE
46	PRIVATE	HANGAR	PRIVATE
47	PRIVATE	HANGAR	PRIVATE
48	PRIVATE	HANGAR	PRIVATE
49	PRIVATE	HANGAR	PRIVATE
50	PRIVATE	HANGAR	PRIVATE
51	PRIVATE	HANGAR	PRIVATE
52	PRIVATE	HANGAR	PRIVATE
53	PRIVATE	HANGAR	PRIVATE
54	PRIVATE	HANGAR	PRIVATE

R = REMOVE

AIRPORT PROJECT LIST

SHORT-TERM (0-5 YEARS)	
B	CONSTRUCT RW15 PARTIAL PARALLEL TAXIWAY (2,020' x 25') & RW33 BYPASS TAXIWAY
C	INSTALL SUPPLEMENTAL WIND SOCKS
D	INSTALL AUTOMATED FUEL FARM
E	PHASE II TREE CLRG - RW 33
MID- TO LONG-TERM (6-20 YEARS)	
G	REHABILITATE RUNWAY 15/33
H	EXTEND / CONSTRUCT RUNWAY 33 PARALLEL TAXIWAY
I	EXPAND HANGAR DEVELOPMENT AREA-HANGARS
J	INSTALL PAPIS ON BOTH RUNWAY ENDS
L	EXTEND RUNWAY / TAXIWAY
M	REHABILITATE / UPGRADE TERMINAL BUILDING

FAA APPROVAL

SUBJECT TO LETTER DATED: _____
 FEDERAL AVIATION ADMINISTRATION
 NEW ENGLAND REGION AIRPORTS DIVISION
 DATED: _____
 CASE NO: _____

SPONSOR APPROVAL

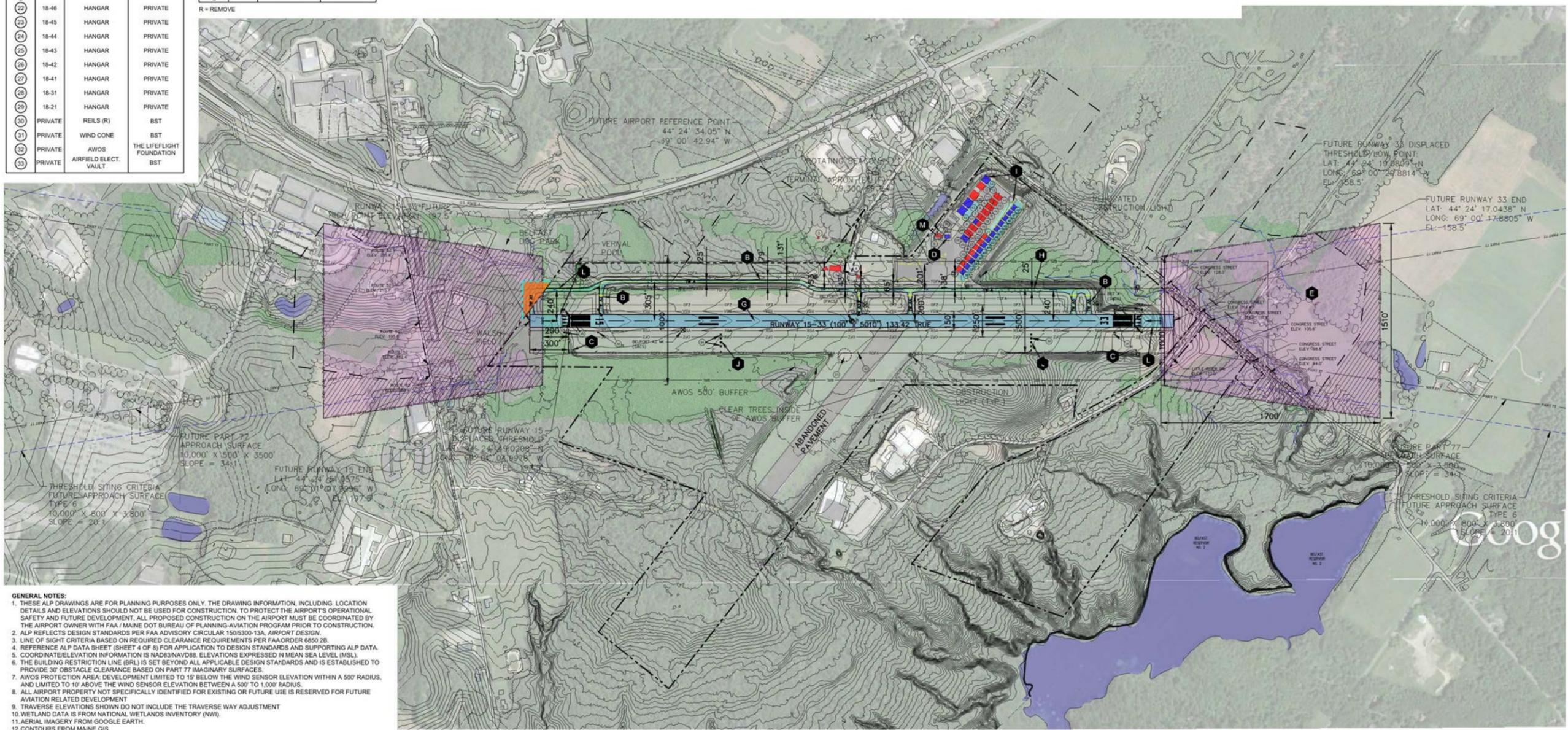
ACCEPTED: CITY OF BELFAST
 DATED: _____

MAINE DOT APPROVAL

BUREAU OF PLANNING - AVIATION PROGRAM
 PLANNING AND PROGRAMMING MANAGER
 DATED: _____

LEGEND

ITEM	(EXISTING)	(FUTURE)
AIRPORT PROPERTY LINE	---	---
FENCE	---	---
RUNWAY SAFETY AREA (RSA)	---	---
OBJECT FREE ZONE (OFZ)	---	---
RUNWAY OBJECT FREE AREA (ROFA)	---	---
RUNWAY PROTECTION ZONE (RPZ)	---	---
AIRPORT REFERENCE POINT (ARP)	+	+
AIRPORT BUILDINGS	█	█
WETLAND	█	█
WATER BODY	█	█
STREAM	█	█
PAVEMENT	█	█
FUTURE DEVELOPMENT	█	█
FUTURE LAND ACQUISITION	█	█
AIRPORT ROTATING BEACON	☆	☆
AIRSPACE OBSTRUCTION LIGHT	☆	☆
TAXIWAY SAFETY AREA (TSA)	---	---
TAXIWAY OBJECT FREE AREA (TOFA)	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AVIGATION EASEMENT	---	---
PART 77 SURFACES	---	---
THRESHOLD SITING CRITERIA SURFACES	---	---
SURVEY MONUMENTS (PACS/SACS)	⊗	⊗

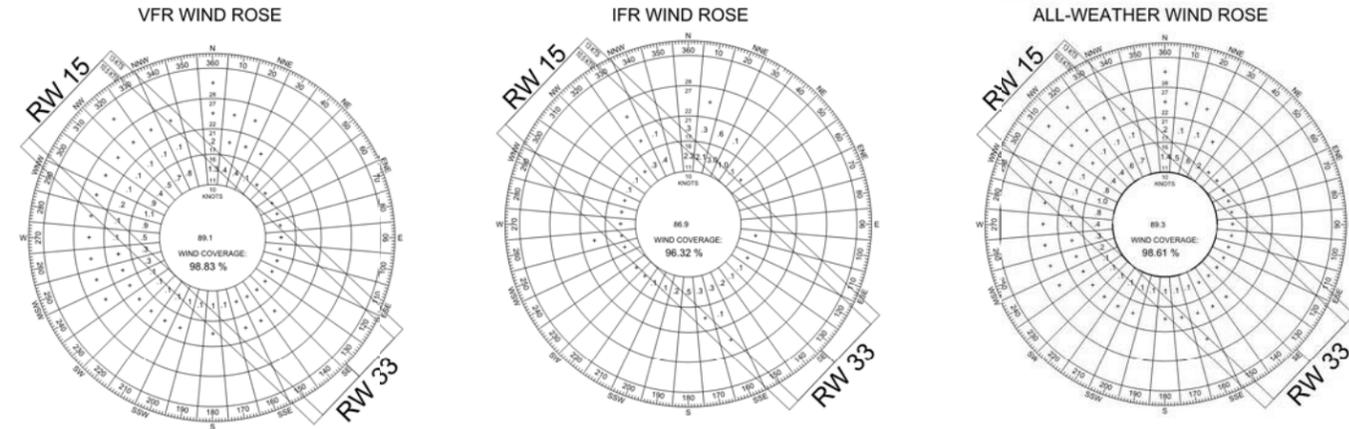


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 8. ALL AIRPORT PROPERTY NOT SPECIFICALLY IDENTIFIED FOR EXISTING OR FUTURE USE IS RESERVED FOR FUTURE AVIATION RELATED DEVELOPMENT.
 9. TRAVERSE ELEVATIONS SHOWN DO NOT INCLUDE THE TRAVERSE WAY ADJUSTMENT
 10. WETLAND DATA IS FROM NATIONAL WETLANDS INVENTORY (NWI).
 11. AERIAL IMAGERY FROM GOOGLE EARTH.
 12. CONTOURS FROM MAINE GIS.

CONSTRUCTION NOTICE REQUIREMENT:
 1. TO PROTECT OPERATIONAL SAFETY AND FUTURE DEVELOPMENT, ALL PROPOSED CONSTRUCTION ON THE AIRPORT MUST BE COORDINATED BY THE AIRPORT OWNER WITH THE FAA AIRPORT DISTRICT OFFICE PRIOR TO CONSTRUCTION. FAA'S REVIEW TAKES APPROXIMATELY 60 DAYS.

117-005 SHEET.LAYOUT.dwg
 A.I.P. PROJECT: NO. 3-23-0007-13-2014
 AIRPORT SOLUTIONS GROUP
 INNOVATION BY DESIGN
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 AIRPORT CONSULTANTS • BURLINGTON, MASSACHUSETTS
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 LITTLE RIVER DRIVE
 BELFAST, ME 04915
 (207) 338-4736
 SHEET TITLE: ULTIMATE AIRPORT LAYOUT PLAN
 PROJECT: BELFAST MUNICIPAL AIRPORT 2016 AIRPORT MASTER PLAN UPDATE
 DESIGNER: RAL CAD: TECH: JMT APPROVED: C.W.
 AUGUST 2017
 EXHIBIT II
 SHEET 3 OF 8

AIRPORT WIND ROSES



Runway	10.5-knot	13-knot
Runway 15	74.03 %	74.48 %
Runway 33	93.03 %	94.66 %
Runway 15/33	97.06 %	98.83 %

Runway	10.5-knot	13-knot
Runway 15	83.39 %	84.88 %
Runway 33	82.59 %	86.45 %
Runway 15/33	92.06 %	96.32 %

Runway	10.5-knot	13-knot
Runway 15	75.85 %	76.36 %
Runway 33	92.34 %	94.13 %
Runway 15/33	96.67 %	98.61 %

* Ceiling less than 1,000 feet and/or visibility greater than three miles.
** Ceiling less than 300 feet and/or visibility greater than 1.00 miles.

SUMMARY OF AIRPORT DESIGN DATA

AIRPORT DESIGN DATA ELEMENT	EXISTING CONDITIONS - FAA STANDARDS		ULTIMATE CONDITIONS - FAA STANDARDS	
	15	33	15	33
RUNWAY IDENTIFIER	15	33	15	33
DESIGN AIRCRAFT	KING AIR 90		KING AIR 90	
RUNWAY CLASSIFICATION (AC MOTOW)	OTHER THAN UTILITY (30,000 LBS)		OTHER THAN UTILITY (30,000 LBS)	
PAVEMENT CONDITION NUMBER (PCN)	2.6 - F - 3 - Y - U		2.6 - F - B - Y - U	
RUNWAY DESIGN CODE (RDC)	B-II-000		B-II-4000	
RUNWAY LENGTH	4,000'		5,010'	
RUNWAY WIDTH	100'		100'	
RUNWAY END LOCATION - LATITUDE (NAD83)*	44° 24' 47.3914" N	44° 24' 20.2352" N	44° 24' 51.0575" N	44° 24' 17.0438" N
RUNWAY END LOCATION - LONGITUDE (NAD83)*	69° 01' 02.5964" W	69° 01' 22.5819" W	69° 01' 07.9999" W	69° 01' 17.8805" W
RUNWAY END ELEVATION (MSL)*	197.5'	158.5'	197.5'	158.5'
TOUCHDOWN ZONE ELEVATION (MSL)*	197.5'	187.9'	197.5'	187.9'
RUNWAY APPROACH TYPE	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
VISIBILITY MINIMUMS	1 mile	1/2 mile	1/2 mile	1/2 mile
RUNWAY APPROACH SLOPE (FAR PART 77)	34:1	34:1	34:1	34:1
RUNWAY APPROACH SLOPE (TH SITING CRITERIA)	20:1 TYPE 5	20:1 TYPE 6	20:1 TYPE 6	20:1 TYPE 6
AERONAUTICAL SURVEY REQUIRED FOR APPROACH	VGS (PA & APV) NVGS	VGS (PA & APV) NVGS	VGS (PA & APV) NVGS	VGS (PA & APV) NVGS
RUNWAY DEPARTURE SURFACE	N/A	N/A	N/A	N/A
RUNWAY DISPLACED THRESHOLD	N/A	N/A	300'	300'
RW DISPLACED TH LOCATION - LATITUDE*	N/A	N/A	44° 24' 49.0208" N	44° 24' 19.0809" N
RW DISPLACED TH LOCATION - LONGITUDE*	N/A	N/A	69° 01' 04.9978" W	69° 01' 20.8814" W
RW DISPLACED TH LOCATION - ELEVATION (MSL)*	N/A	N/A	197.5'	158.5'
RUNWAY SAFETY AREA (RSA) WIDTH	150'	150'	150'	150'
RUNWAY SAFETY AREA (RSA) LENGTH BEYOND RW	300'	300'	300'	300'
RUNWAY PROTECTION ZONE (RPZ) - LxWxW	1000x500x700'	1700x1000x1510'	1700x1000x1510'	1700x1000x1510'
RUNWAY OBSTACLE FREE ZONE (ROFZ) WIDTH	250'	250'	250'	250'
RUNWAY OBSTACLE FREE ZONE (ROFZ) LENGTH BEYOND RW	200'	200'	200'	200'
RUNWAY OBJECT FREE AREA (ROFA) WIDTH	500'	500'	500'	500'
RUNWAY OBJECT FREE AREA (ROFA) LENGTH BEYOND RW	300'	300'	300'	300'
RUNWAY SURFACE TYPE	ASPHALT		ASPHALT	
SURFACE TREATMENT	NOT APPLICABLE		NOT APPLICABLE	
RUNWAY PAVEMENT DESIGN STRENGTH**	30,000 LBS SW		30,000 LBS SW	
RUNWAY EFFECTIVE GRADIENT	0.9%		0.98%	
RUNWAY MARKINGS	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
RUNWAY EDGE LIGHTING	MIRLS (STATE)		MIRLS (STATE)	
RUNWAY APPROACH LIGHTING	REIL (BST)	REIL (BST)	REIL (BST)	REIL (BST)
RUNWAY VISUAL APPROACH AIDS	NONE	NONE	PAPI	PAPI
RUNWAY INSTRUMENT NAVIGATIONAL AIDS	RNAV, NDB	RNAV, NDB	RNAV	RNAV
TAXIWAY DESIGN GROUP (TDG)	1A		1A	
TAXIWAY WIDTH	4F		25'	
TAXIWAY EDGE LIGHTING	N/A		MITLS	
TAXIWAY MARKINGS	CL & HOLD/INK POSITIONS		CL & HOLDING POSITIONS	
TAXIWAY SAFETY AREA WIDTH (TSA)	75'		75'	
TAXIWAY OBJECT FREE AREA WIDTH (TOFA)	13'		131'	
TAXIWAY CENTERLINE TO FIXED/MOVABLE OBJECT	65.5'		65.5'	
TAXIWAY CENTERLINE TO PARALLEL RUNWAY	240'		240'	

* EXISTING RUNWAY LOCATION AND ELEVATION DATA, INCLUDING DISPLACED THRESHOLD, DAT, IS EXPRESSED IN NAD83 AND NAVD88 AS APPLICABLE.
** PAVEMENT STRENGTHS ARE EXPRESSED IN SINGLE WHEEL (SW) AND DUAL WHEEL (DW) LOADING CAPACITIES - K = 1,000 LBS
*** OTHER SPECIFIC EXISTING RUNWAY DATA WAS OBTAINED FROM PLANS OF RECORD

AIRPORT DATA

	EXISTING	FUTURE
AIRPORT ELEVATION	197.6	197.6
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD83)	LAT. 44° 24' 33.80" N LONG. 69° 00' 42.60" W	LAT. 44° 24' 34.05" N LONG. 69° 00' 42.94" W
MEAN MAX. TEMP. (HOTTEST MONTH) - AUGUST	81°F	81°F
FUNCTIONAL ROLE (NPIAS)	GENERAL AVIATION (GA)	GENERAL AVIATION (GA)
FUNCTIONAL ROLE (FAA ASSET)	LOCAL	BASIC
FUNCTIONAL ROLE (ME STATEWIDE AIRPORT SYSTEM PLAN)	LEVEL III	LEVEL III
AIRPORT CLASSIFICATION	OTHER THAN UTILITY	OTHER THAN UTILITY
AIRPORT REFERENCE CODE (ARC)	B-II	B-II
AIRPORT NAVIGATIONAL AIDS	WINDCONE, SEGMENTED CIRCLE, AWOS, BEACON, NDB	WINDCONE, SEGMENTED CIRCLE, AWOS, BEACON
AIRPORT MAGNETIC DECLINATION	SOURCE: NOAA MAGNETIC FIELD CALCULATOR 16°02'00"W, +/- 0.37", changing by 0.09"E per year	

DECLARED DISTANCES

	RUNWAY 15	RUNWAY 33
TAKEOFF RUN AVAILABLE (TORA)	4000'	4710'
TAKEOFF DISTANCE AVAILABLE (TODA)	4000'	4710'
ACCELERATE-STOP DISTANCE AVAILABLE (ASDA)	4000'	4710'
LANDING DISTANCE AVAILABLE (LDA)	4000'	4400'

MODIFICATION TO STANDARDS

APPROVED: NONE
REQUESTED: NONE

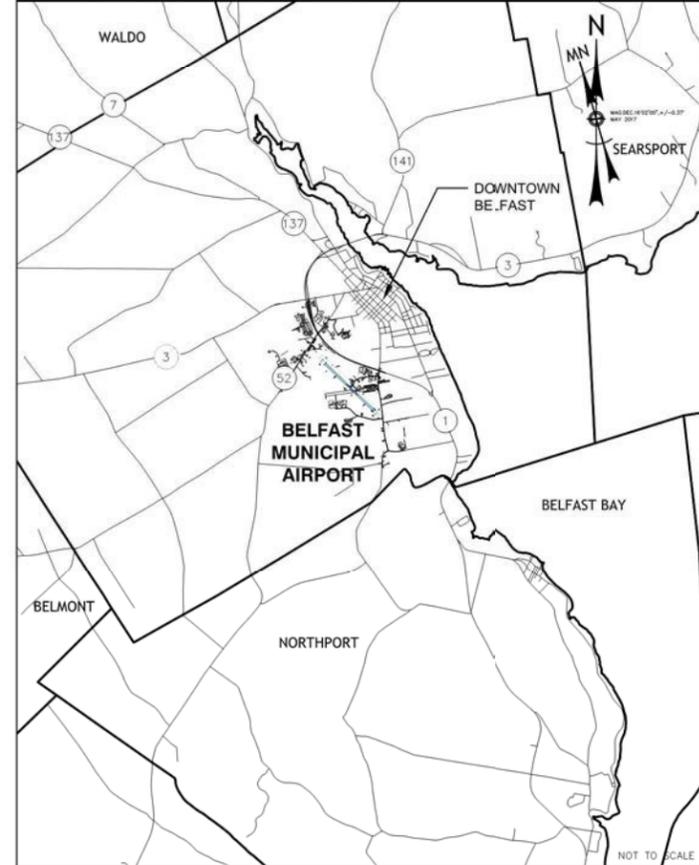
THE UNDERSIGNED CERTIFIES THAT AIRPORT ELEMENTS SHOWN ON THIS ALP ARE IN ACCORDANCE WITH CRITERIA CONTAINED IN THE CURRENT EDITION OF THE FAA ADVISORY CIRCULAR 150/5300-13A (SEPTEMBER 28, 2012) EXCEPT AS NOTED ABOVE.

SIGNATURE OF SPONSOR _____ DATE _____

LOCATION MAP



AIRPORT VICINITY MAP



SOURCE INFORMATION
1. EXISTING DESIGN AIRCRAFT (KING AIR 90) WAS OBTAINED FROM 2008 ALP UPDATE; ULTIMATE DESIGN AIRCRAFT (KING AIR 90) WAS OBTAINED FROM 2016 MASTER PLAN UPDATE
2. EXISTING RUNWAY END LOCATION & ELEVATION DATA WAS OBTAINED FROM 2008 ALP UPDATE
3. EXISTING RUNWAY PAVEMENT DESIGN STRENGTH WAS OBTAINED FROM 2008 ALP UPDATE
4. TEMPERATURE DATA FROM NOAA NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION, CLIMATE AT A GLANCE: U.S. TIME SERIES, MAXIMUM TEMPERATURE, PUBLISHED JULY 2017, RETRIEVED ON JULY 12, 2017 FROM HTTP://WWW.NCDC.NOAA.GOV/CAI/
5. FAA SECTIONAL CHART FROM AIRNAV
6. VICINITY MAP FROM MAINE GIS

117-005 SHEET-TECHNICAL-DATA.dwg
A.I.P. PROJECT NO. 3-23-0007-13-2014

AIRPORT SOLUTIONS GROUP
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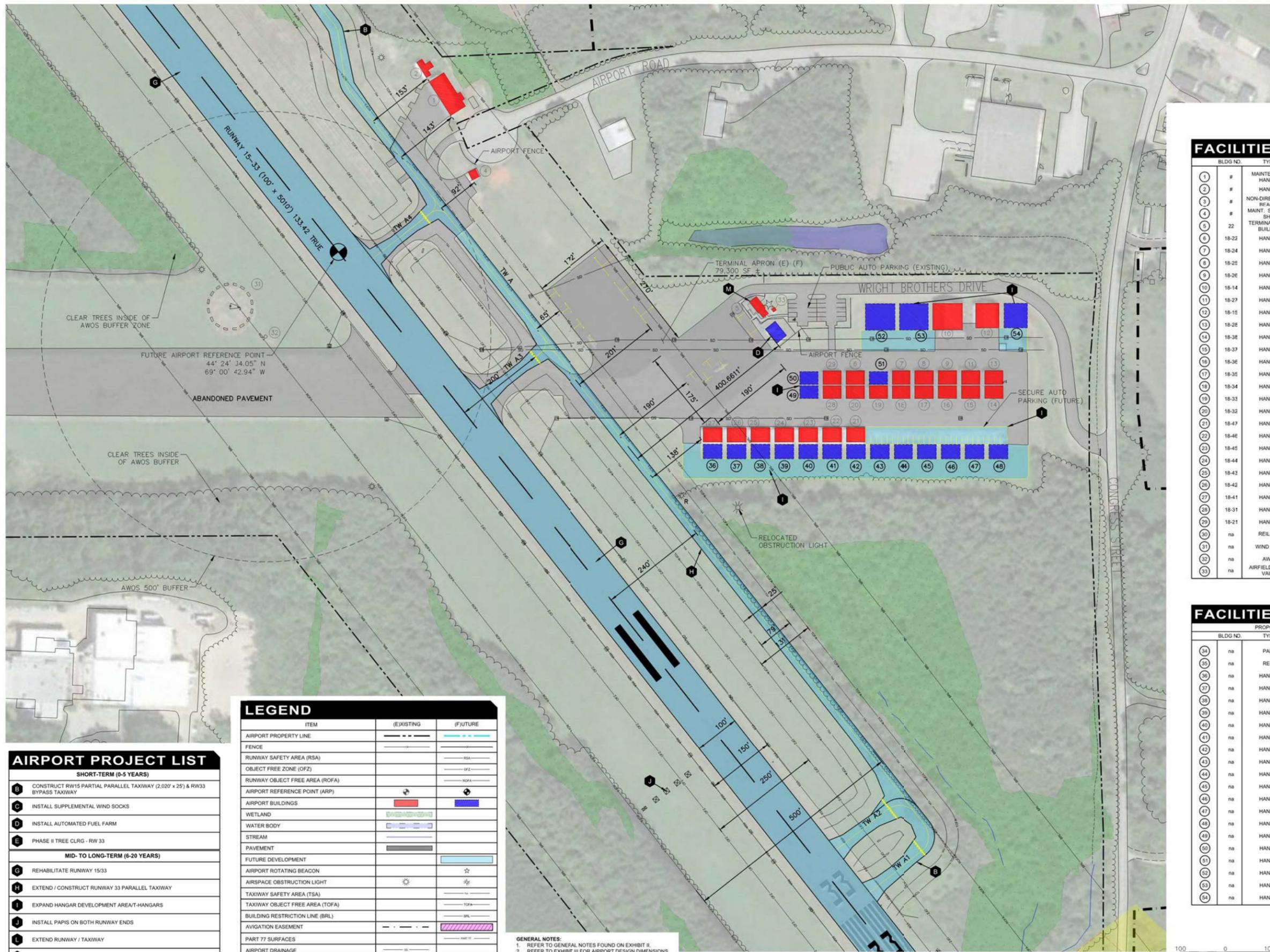
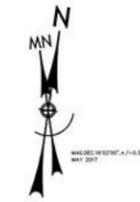
TECHNICAL DATA SHEET

BELFAST MUNICIPAL AIRPORT
2016 AIRPORT MASTER PLAN UPDATE

AUGUST 2017

EXHIBIT III

SHEET 4 OF 8



FACILITIES LIST

BLDG NO.	TYPE	OWNER
1	MAINTENANCE HANGAR	BST
2	HANGAR	BST
3	HANGAR	BST
4	NON-DIRECTIONAL REACTION MAINT. STORAGE SHED	BST
5	TERMINAL/ADMIN BUILDING	BST
6	18-22 HANGAR	PRIVATE
7	18-24 HANGAR	PRIVATE
8	18-25 HANGAR	PRIVATE
9	18-26 HANGAR	PRIVATE
10	18-14 HANGAR	PRIVATE
11	18-27 HANGAR	PRIVATE
12	18-15 HANGAR	PRIVATE
13	18-28 HANGAR	PRIVATE
14	18-38 HANGAR	PRIVATE
15	18-37 HANGAR	PRIVATE
16	18-36 HANGAR	PRIVATE
17	18-35 HANGAR	PRIVATE
18	18-34 HANGAR	PRIVATE
19	18-33 HANGAR	PRIVATE
20	18-32 HANGAR	PRIVATE
21	18-47 HANGAR	PRIVATE
22	18-46 HANGAR	PRIVATE
23	18-45 HANGAR	PRIVATE
24	18-44 HANGAR	PRIVATE
25	18-43 HANGAR	PRIVATE
26	18-42 HANGAR	PRIVATE
27	18-41 HANGAR	PRIVATE
28	18-31 HANGAR	PRIVATE
29	18-21 HANGAR	PRIVATE
30	REILS (R)	BST
31	WIND CONE	BST
32	AWOS	THE LIFEFLIGHT FOUNDATION
33	AIRFIELD ELECT. VAULT	BST

FACILITIES LIST

PROPOSED		
BLDG NO.	TYPE	OWNER
34	PAPIS	FAA
35	REILS	FAA
36	HANGAR	PRIVATE
37	HANGAR	PRIVATE
38	HANGAR	PRIVATE
39	HANGAR	PRIVATE
40	HANGAR	PRIVATE
41	HANGAR	PRIVATE
42	HANGAR	PRIVATE
43	HANGAR	PRIVATE
44	HANGAR	PRIVATE
45	HANGAR	PRIVATE
46	HANGAR	PRIVATE
47	HANGAR	PRIVATE
48	HANGAR	PRIVATE
49	HANGAR	PRIVATE
50	HANGAR	PRIVATE
51	HANGAR	PRIVATE
52	HANGAR	PRIVATE
53	HANGAR	PRIVATE
54	HANGAR	PRIVATE

CADD FILE NO. 117-005 SHEET.LAYOUT.dwg
 A.I.P. PROJECT NO. 3-23-0007-13-2014

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 BELFAST, ME 04915
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SHEET TITLE
 TERMINAL AREA PLAN
 PROJECT
 BELFAST MUNICIPAL AIRPORT
 2016 AIRPORT MASTER PLAN UPDATE
 DESIGNER: RAL CADD TECH: JMT APPROVED: CJW

AUGUST 2017
 EXHIBIT IV
 SHEET 5 OF 8

LEGEND

ITEM	(EXISTING)	(FUTURE)
AIRPORT PROPERTY LINE	---	---
FENCE	---	---
RUNWAY SAFETY AREA (RSA)	---	---
OBJECT FREE ZONE (OFZ)	---	---
RUNWAY OBJECT FREE AREA (ROFA)	---	---
AIRPORT REFERENCE POINT (ARP)	+	+
AIRPORT BUILDINGS	■	■
WETLAND	■	■
WATER BODY	■	■
STREAM	---	---
PAVEMENT	---	---
FUTURE DEVELOPMENT	---	---
AIRPORT ROTATING BEACON	☆	☆
AIRSPACE OBSTRUCTION LIGHT	☆	☆
TAXIWAY SAFETY AREA (TSA)	---	---
TAXIWAY OBJECT FREE AREA (TOFA)	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AVIGATION EASEMENT	---	---
PART 77 SURFACES	---	---
AIRPORT DRAINAGE	---	---

AIRPORT PROJECT LIST

- SHORT-TERM (0-5 YEARS)**
- B** CONSTRUCT RW15 PARTIAL PARALLEL TAXIWAY (2,020' x 25') & RW33 BYPASS TAXIWAY
 - C** INSTALL SUPPLEMENTAL WIND SOCKS
 - D** INSTALL AUTOMATED FUEL FARM
 - E** PHASE II TREE CLRG - RW 33
- MID- TO LONG-TERM (6-20 YEARS)**
- G** REHABILITATE RUNWAY 15/33
 - H** EXTEND / CONSTRUCT RUNWAY 33 PARALLEL TAXIWAY
 - I** EXPAND HANGAR DEVELOPMENT AREA-T-HANGARS
 - J** INSTALL PAPIS ON BOTH RUNWAY ENDS
 - K** EXTEND RUNWAY / TAXIWAY
 - M** REHABILITATE / UPGRADE TERMINAL BUILDING

GENERAL NOTES:
 1. REFER TO GENERAL NOTES FOUND ON EXHIBIT II.
 2. REFER TO EXHIBIT III FOR AIRPORT DESIGN DIMENSIONS.



PART 77 DIMENSIONAL CRITERIA

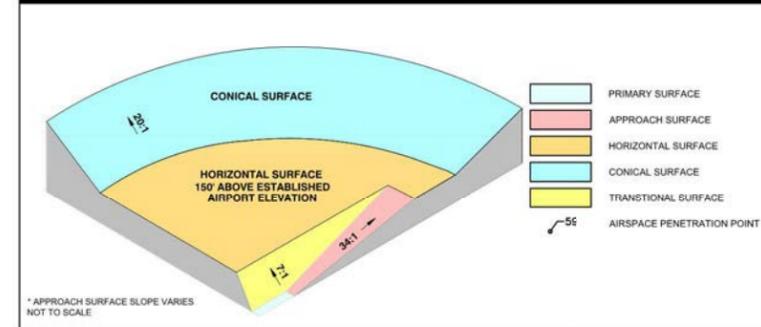
EXISTING CONDITIONS **								
RUNWAY	RUNWAY CLASSIFICATION	APPROACH PROCEDURE	VISIBILITY MINIMUMS	PRIMARY SURFACE	INNER APPROACH WIDTH	CUTTER APPROACH WIDTH	APPROACH LENGTH	APPROACH SLOPE
15	OTHER THAN UTILITY	NON-PRECISION	1 MI.	500'	500'	500'	10,000'	34:1
33	OTHER THAN UTILITY	NON-PRECISION	1/2 MI.	500'	500'	500'	10,000'	34:1
ULTIMATE CONDITIONS								
RUNWAY	RUNWAY CLASSIFICATION	APPROACH PROCEDURE	VISIBILITY MINIMUMS	PRIMARY SURFACE	INNER APPROACH WIDTH	CUTTER APPROACH WIDTH	APPROACH LENGTH	APPROACH SLOPE
15	OTHER THAN UTILITY	NON-PRECISION	1/2 MI.	500'	500'	500'	10,000'	34:1
33	OTHER THAN UTILITY	NON-PRECISION	1/2 MI.	500'	500'	500'	10,000'	34:1

PART 77 IMAGINARY SURFACE DIMENSIONS

TYPE	DIMENSIONAL STANDARDS (FEET)				
	VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY		PRECISION INSTRUMENT RUNWAY
	A	B	A	B	
EXISTING RUNWAY ENDS					
FUTURE RUNWAY ENDS					
WIDTH OF PRIMARY SURFACE & APPROACH SURFACE AT INNER END	250'	500'	500'	500'	1,000'
PRIMARY SURFACE BEYOND RW END	200'	200'	200'	200'	200'
RADIUS OF HORIZONTAL SURFACE	5,000'	5,000'	5,000'	10,000'	10,000'
APPROACH SURFACE WIDTH AT END	1,250'	1,500'	2,000'	3,500'	4,000'
APPROACH SURFACE LENGTH	5,000'	5,000'	5,000'	10,000'	10,000'
APPROACH SURFACE SLOPE	20:1	20:1	20:1	34:1	50:1 / 40:1 *
TRANSITIONAL SURFACE SLOPE	7:1	7:1	7:1	7:1	7:1
CONICAL SURFACE HORIZONTAL DIST	4,000'	4,000'	4,000'	4,000'	4,000'
CONICAL SURFACE SLOPE	20:1	20:1	20:1	20:1	20:1

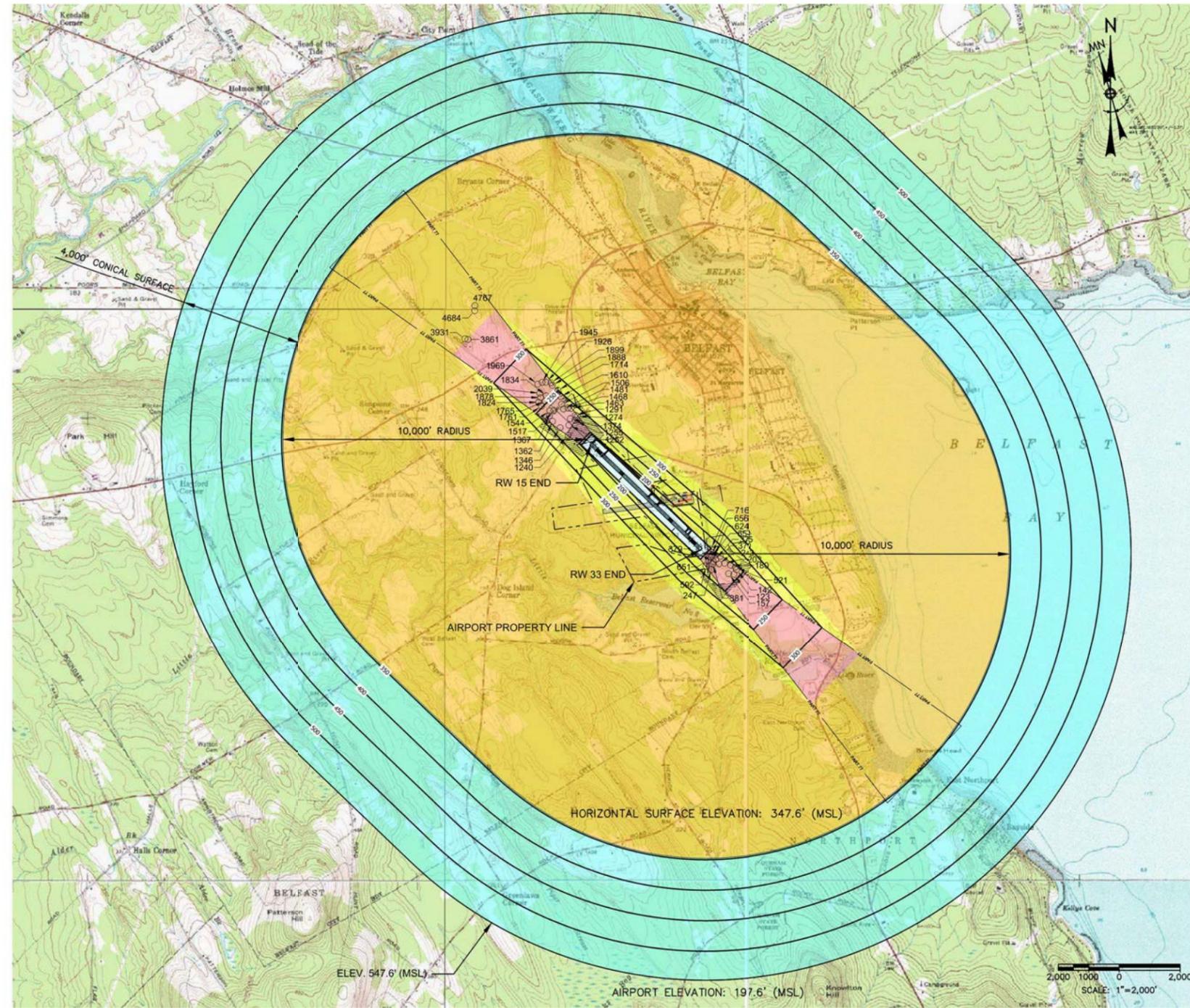
RUNWAY TYPE: A - UTILITY RUNWAY; B - OTHER THAN UTILITY RUNWAY
 VISIBILITY TYPE: C - VISIBILITY MINIMUMS GREATER THAN 3/4 MILE; D - VISIBILITY MINIMUMS AS LOW AS 3/4 MILE

ISOMETRIC VIEW OF PART 77 SURFACES



PART 77 APPROACH OBSTRUCTIONS

OBJECT NUMBER	DESCRIPTION	GROUND SURFACE ELEVATION (FT MSL)	OBJECT ELEVATION (FT MSL)	SURFACE PENETRATION (FT)	PART 77 SURFACE	PART 77 MITIGATION / DISPOSITION**
1240	TREE	183.4	232.7	14.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1252	TREE	192.9	250.3	30.8	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1255	TREE	209.6	248.3	29.7	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1274	TREE	211.7	248.1	28.4	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1291	TREE	212.8	272.1	50.6	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1346	TREE	182.5	238.1	14.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1362	TREE	185.5	249.5	16.0	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1367	TREE	187.2	267.8	28.5	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1374	TREE	210.0	244.6	21.8	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1463	TREE	219.8	272.6	43.5	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1468	TREE	219.9	282.6	50.9	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1481	TREE	214.1	290.0	55.9	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1506	TREE	216.0	282.1	43.5	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1517	TREE	191.3	270.0	30.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1544	TREE	188.2	273.8	31.5	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1610	TREE	217.2	280.9	36.6	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1714	TREE	217.1	290.0	39.4	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1761	TREE	184.3	263.3	12.0	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1765	TREE	190.2	270.3	18.1	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1824	TREE	184.8	278.2	22.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1834	TREE	198.4	285.3	30.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1878	TREE	190.4	270.6	13.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1888	TREE	207.3	283.1	25.5	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1899	TREE	203.2	292.0	31.7	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1926	TREE	200.0	278.5	14.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1945	TREE	200.0	281.1	14.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
1969	TREE	193.4	277.0	8.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
2039	TREE	191.4	281.5	20.4	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
3861	TREE	256.1	353.3	6.4	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
3931	TREE	260.1	360.0	10.4	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
4684	TREE	310.0	368.5	7.0	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
4767	TREE	299.8	375.2	10.4	APPROACH	NO ACTION PENDING FURTHER ANALYSIS



PART 77 APPROACH OBSTRUCTIONS

OBJECT NUMBER	DESCRIPTION	GROUND SURFACE ELEVATION (FT MSL)	OBJECT ELEVATION (FT MSL)	SURFACE PENETRATION (FT)	PART 77 SURFACE	PART 77 MITIGATION / DISPOSITION**
123	TREE	102.2	194.7	2.8	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
142	TREE	104.8	197.8	7.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
157	TREE	103.3	191.6	3.8	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
180	TREE	107.0	194.4	10.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
203	TREE	108.7	188.8	10.7	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
243	TREE	108.8	190.6	16.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
247	TREE	94.5	186.9	13.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
370	TREE	111.4	193.6	23.0	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
375	TREE	109.5	186.0	16.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS

GENERAL NOTES:
 1. ALL ELEVATIONS ARE TO MEAN SEA LEVEL (MSL).
 2. COORDINATES AND NORTH ORIENTATION REFERENCE THE MAINE COORDINATE SYSTEM OF 1981 EAST ZONE WITH UNITS OF US SURVEY FEET.
 3. CONTOURS AND SPOT ELEVATIONS SHOWN REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83) AS DETERMINED BY LOCAL BENCHMARKS BELFORT, BELFORT AZ MRK AND BST A.
 4. SEE INNER PORTION OF THE APPROACH PLAN AND PROFILE SHEETS FOR CLOSE IN OBSTRUCTIONS.
 5. MAPPING SHOWN IS BASED ON FIELD WORK CONDUCTED IN JULY OF 2015 BY PLUSGA & DAY LAND SURVEYORS, BANGOR, MAINE.
 6. TREETOP SURVEY DATA FROM COL EAST DATED OCTOBER 2012.
 7. IMAGE SOURCE: USGS.GOV, USGS US TOPO 7.5 MINUTE MAPS, V1979 & V2012

PART 77 APPROACH OBSTRUCTIONS

OBJECT NUMBER	DESCRIPTION	GROUND SURFACE ELEVATION (FT MSL)	OBJECT ELEVATION (FT MSL)	SURFACE PENETRATION (FT)	PART 77 SURFACE	PART 77 MITIGATION / DISPOSITION**
379	TREE	105.9	190.4	21.1	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
381	TREE	104.0	182.5	12.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
521	TREE	106.6	199.6	11.5	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
592	TREE	105.8	190.0	22.9	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
624	TREE	111.1	179.7	13.8	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
651	TREE	107.1	180.7	15.8	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
654	TREE	106.0	185.4	20.8	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
656	TREE	111.2	185.8	22.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS
716	TREE	112.5	181.5	22.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS

** OFF AIRPORT PART 77 OBSTRUCTIONS WILL REQUIRE ADDITIONAL ANALYSIS TO IDENTIFY ANY APPROPRIATE MITIGATION MEASURES
 *** THESE POINT ARE IN ADDITION TO POINTS IN THE TABLE ON EXHIBIT VI.

CADD FILE NO. 117-005 SHEET_AIRSPACE.dwg
 A.I.P. PROJECT NO. 3-23-0007-13-2014

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SHEET TITLE
 AIRPORT AIRSPACE DRAWING
 (14 CFR PART 77 SURFACE)

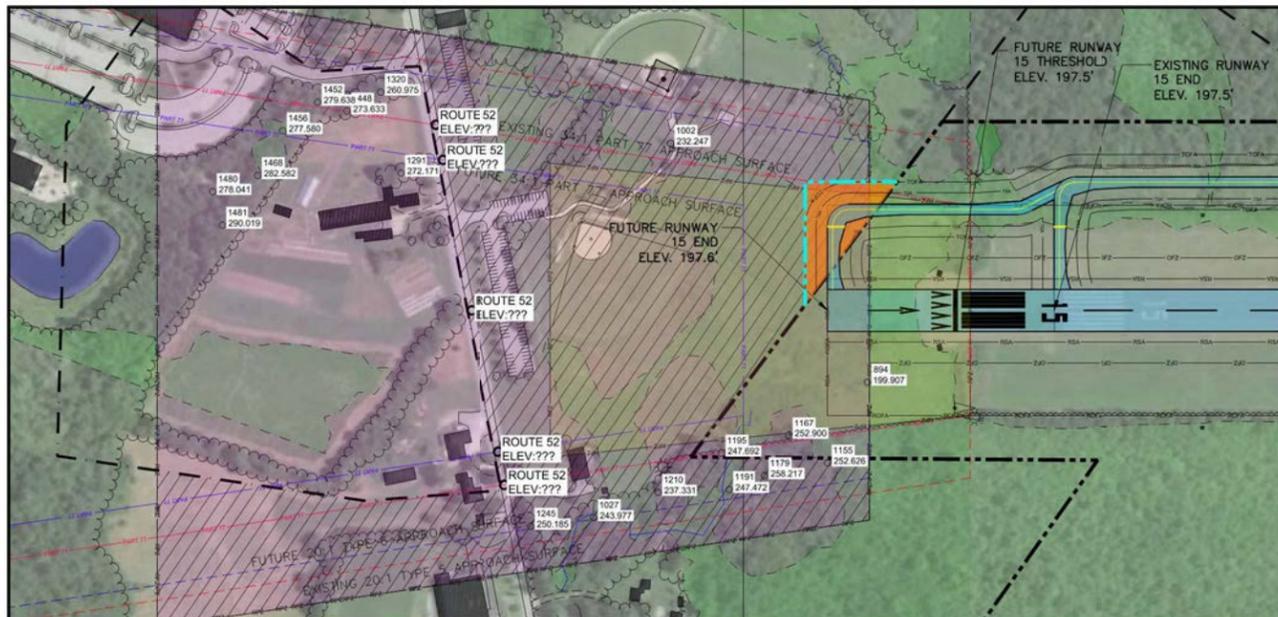
PROJECT
 BELFAST MUNICIPAL AIRPORT
 2016 AIRPORT MASTER PLAN UPDATE

DESIGNER: RAL CADD TECH: JMT APPROVED: CJW

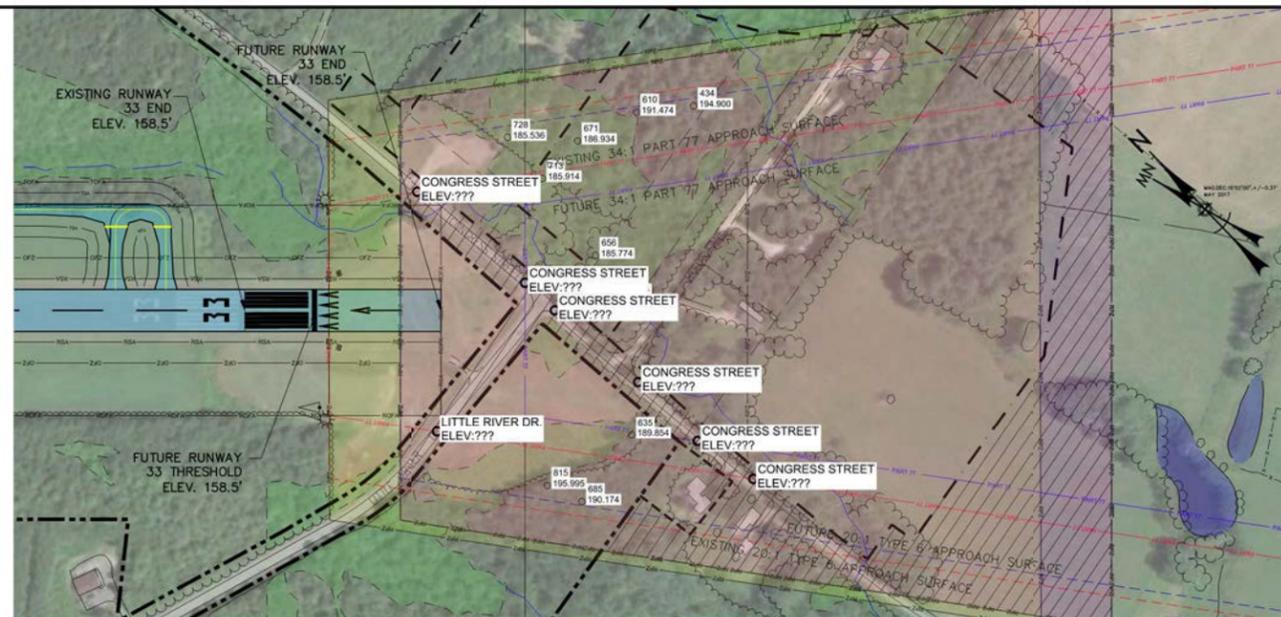
AUGUST 2017

EXHIBIT V

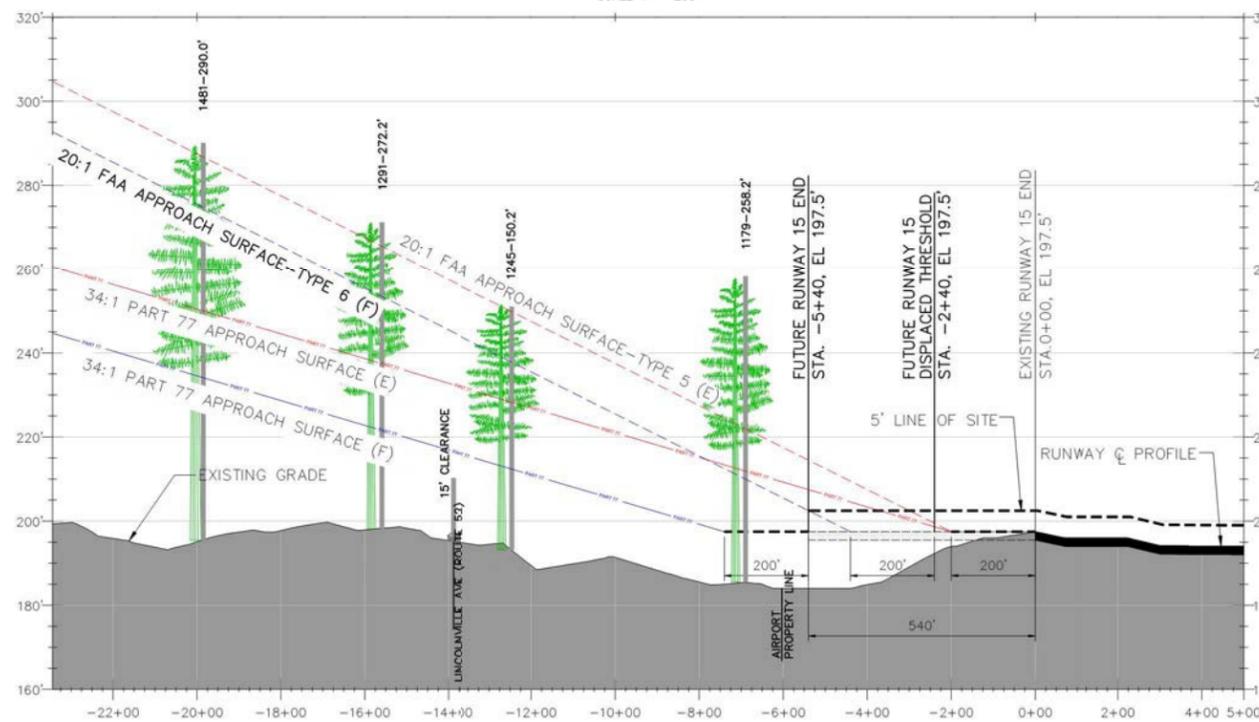
SHEET 6 OF 8



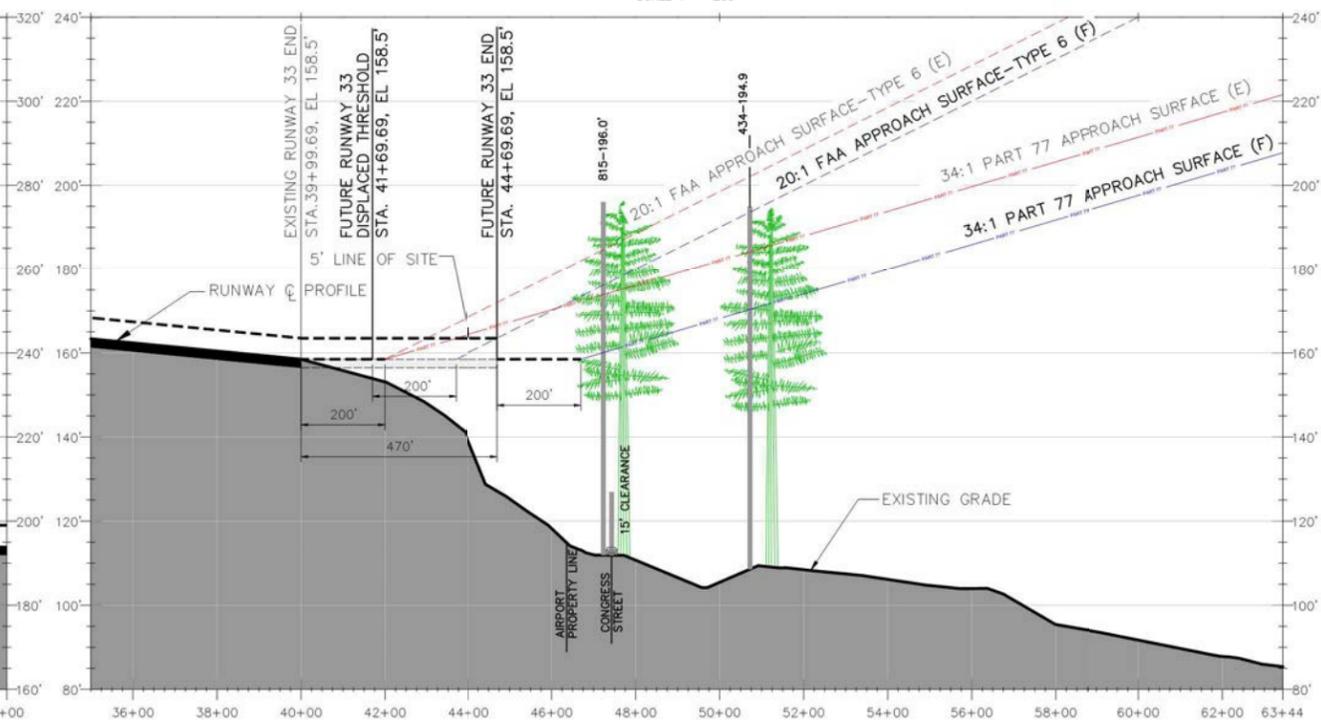
RUNWAY 15 PLAN
SCALE 1" = 200'



RUNWAY 33 PLAN
SCALE 1" = 200'



RUNWAY 15 PROFILE
HORIZONTAL SCALE 1" = 200'
VERTICAL SCALE 1" = 20'



RUNWAY 33 PROFILE
HORIZONTAL SCALE 1" = 200'
VERTICAL SCALE 1" = 20'

- NOTES:**
1. OBSTRUCTIONS SHOWN IN TABLE AND PROFILES REFLECT "WORST-CASE" POINTS WITHIN APPROXIMATELY 100 FOOT RADIUS AREAS WITHIN TYPE 6 APPROACH SURFACE.
 2. TREE TOP SURVEY DATA FROM COL EAST DATED OCTOBER 2012.
 3. RUNWAY END DATA FROM FAA AVN DATASHEET SYSTEM (DATA FOR 15-33 DATED 6/15/2010).
 4. GROUND CONTOUR INFORMATION FROM ME GIS.
 5. "FAA APPROACH SURFACE" REFLECTS TABLE 3-2 IN FAA AC 150/5300-13A, AIRPORT DESIGN.
 6. "PART 77 APPROACH SURFACE" REFLECTS THE REQUIREMENTS OF 14 CFR PART 77.
 7. TRAVERSE ELEVATIONS SHOWN DO NOT INCLUDE THE TRAVERSE WAY ADJUSTMENT.
 8. IMAGERY FROM GOOGLE EARTH.

LEGEND

ITEM	(E)XISTING	(F)UTURE
AIRPORT PROPERTY LINE	---	---
FENCE	---	---
RUNWAY SAFETY AREA (RSA)	---	---
OBJECT FREE ZONE (OFZ)	---	---
RUNWAY OBJECT FREE AREA (ROFA)	---	---
RUNWAY PROTECTION ZONE (RPZ)	---	---
AIRPORT BUILDINGS	---	---
WETLAND	---	---
WATER BODY	---	---
STREAM	---	---
PAVEMENT	---	---
FUTURE DEVELOPMENT	---	---
FUTURE LAND ACQUISITION	---	---
AVIGATION EASEMENT	---	---
PART 77 SURFACES	---	---
THRESHOLD SITING CRITERIA SURFACES	---	---

TYPE 6 APPROACH SURFACE OBSTRUCTIONS

OBJECT NUMBER	DESCRIPTION	OBJECT ELEVATION (FT MSL)	SURFACE PENETRATION (FT)	SURFACE	APPROACH MITIGATION / DISPOSITION **	PART 77 APPROACH OBSTRUCTION
434	TREE	194.9	1.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
610	TREE	191.5	4.7	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
635	TREE	189.9	3.6	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
654	TREE	185.4	1.5	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	YES
656	TREE	185.8	3.9	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	YES
671	TREE	186.9	7.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
685	TREE	190.2	10.0	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
713	TREE	185.9	10.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
728	TREE	185.5	10.0	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
815	TREE	196.0	19.8	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
894	TREE	199.9	2.1	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1002	TREE	232.2	11.1	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1027	TREE	244.0	13.7	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1155	TREE	252.6	50.1	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO

TYPE 6 APPROACH SURFACE OBSTRUCTIONS

OBJECT NUMBER	DESCRIPTION	OBJECT ELEVATION (FT MSL)	SURFACE PENETRATION (FT)	SURFACE	PART 77 MITIGATION / DISPOSITION **	PART 77 APPROACH OBSTRUCTION
1167	TREE	252.9	45.8	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1179	TREE	258.2	48.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1191	TREE	247.5	33.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1195	TREE	247.7	32.6	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1210	TREE	237.3	14.7	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1245	TREE	250.2	12.4	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1291	TREE	272.2	18.7	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	YES
1320	TREE	261.0	5.1	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1448	TREE	273.6	13.7	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1452	TREE	279.6	16.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1456	TREE	277.6	10.0	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	NO
1468	TREE	282.6	12.1	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	YES
1480	TREE	278.0	2.2	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	YES
1481	TREE	290.0	15.3	APPROACH	NO ACTION PENDING FURTHER ANALYSIS	YES



CADD FILE NO. 117-005 SHEET PLAN PROFILE.dwg
A.I.P. PROJECT NO. 3-23-0007-13-2014

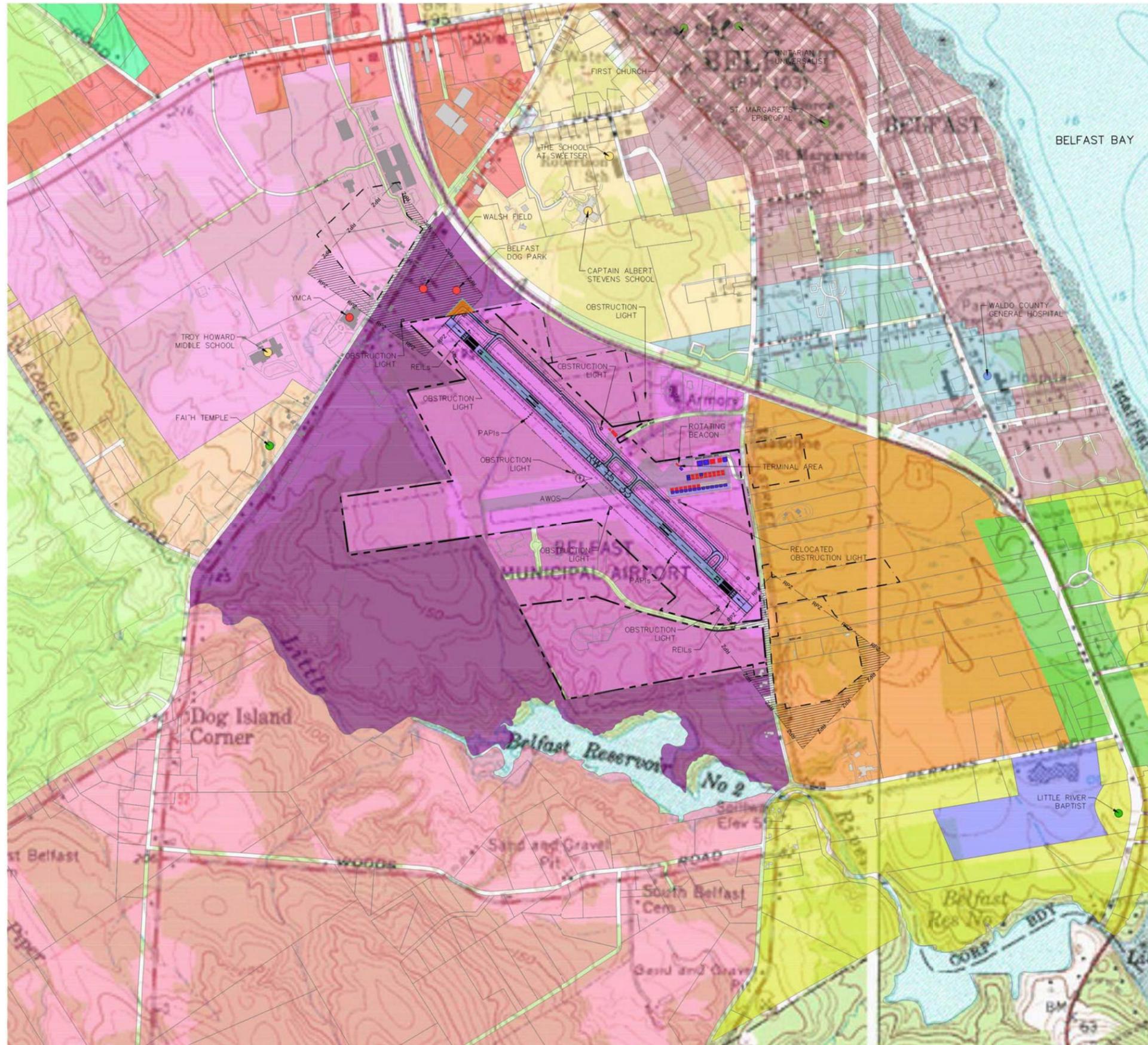
AIRPORT SOLUTIONS GROUP
INNOVATION BY DESIGN
AIRPORT CONSULTANTS • BURLINGTON, MASSACHUSETTS

BELFAST MUNICIPAL AIRPORT
LITTLE RIVER DRIVE
BELFAST, ME 04915
(207) 338-4736

INNER PORTION OF THE APPROACH PLAN AND PROFILE - RUNWAY 15-33

BELFAST MUNICIPAL AIRPORT
2016 AIRPORT MASTER PLAN UPDATE

DESIGNER: RAL CADD TECH: JMT APPROVED: CJW



GENERAL LEGEND

- AIRPORT PROPERTY LINE
- RUNWAY PROTECTION ZONE (RPZ)
- EXISTING AVIGATION EASEMENTS
- FUTURE AVIGATION EASEMENTS
- SCHOOLS
- HOSPITALS
- PARKS
- CHURCHES

LAND USE LEGEND

- AC: AIRPORT GROWTH DISTRICT
- BP: BUSINESS PARK-AIRPORT DISTRICT
- GP-B: GENERAL PURPOSE "B" DISTRICT
- INDIV: INDUSTRIAL IV PERKINS ROAD DISTRICT
- OFFICE PARK DISTRICT
- R-1: RESIDENTIAL II DISTRICT
- RES-1: RESIDENTIAL 1 DISTRICT
- RES-2: RESIDENTIAL 2 DISTRICT
- RES-3: RESIDENTIAL 3 DISTRICT
- RG: RESIDENTIAL GROWTH DISTRICT
- RT-1S: ROUTE ONE SOUTH COMMERCIAL DISTRICT
- RT-3: ROUTE 3 COMMERCIAL DISTRICT
- WIU-1: WATERFRONT MIXED USE 1 DISTRICT
- WIU-2: WATERFRONT MIXED USE 2 DISTRICT
- WATER



- NOTES:
- LAND USE DATA PROVIDED BY CITY OF BELFAST PLANNING DEPARTMENT
 - IMAGE SOURCE: USGS.GOV, USGS US TOPO 7.5 MINUTE MAPS, V1979 & V2012



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AIRPORT SOLUTIONS GROUP INNOVATION BY DESIGN PHONE (781) 491-0083 FAX (781) 491-0360 AIRPORT CONSULTANTS • BURLINGTON, MASSACHUSETTS	
BELFAST MUNICIPAL AIRPORT LITTLE RIVER DRIVE BELFAST, ME 04915 (207) 338-4736	
SHEET TITLE OFF-AIRPORT LAND USE PLAN	PROJECT BELFAST MUNICIPAL AIRPORT 2016 AIRPORT MASTER PLAN UPDATE
DESIGNER: RAL CADD TECH: JMT APPROVED: CJW	AUGUST 2017
EXHIBIT VII	
SHEET 8 OF 8	