

# **AIRLINE CONSULTATION MEETING**

## **Passenger Facility Charges**

### **Proposed Projects**



**South Burlington, Vermont**

**August 2012**

Prepared by:

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## INTRODUCTION

The Burlington International Airport Board of Airport Commissioners, South Burlington, Vermont intends to file an application with the Federal Aviation Administration (FAA) to use and to impose Passenger Facility Charges (PFCs) on various projects at the airport. Collections will be made at the rate of \$4.50 per enplaned passenger. The anticipated start date for collections is January 1, 2016. The anticipated expiration date is July 1, 2017.

## PROJECTS TO BE INCLUDED IN THE NEW APPLICATION

1	Purchase Snow Removal Equipment
2	Terminal Building Renovations a. Replace Terminal Roof b. Gate 1A Walkway c. Upgrade Restrooms - North Concourse d. Elevator Replacement (South End) e. New Boarding Bridge (Gate 11) f. Replace Boiler in Main Terminal
3	Taxiway B Reconstruction (local share)
4	Design Taxiway G
5	Reconstruct Cargo Apron Including New Glycol Collection and Treatment System (local share)
6	Update NEM -2012 (local share)
7	PFC Application Costs a. Airport Admin costs b. 2012 PFC Application Costs c. Amendment 10-04-C-01-BTV

## NOTICE TO AIR CARRIERS

A meeting will be held with the air carriers and foreign air carriers on **September 27, 2012 at 1:30 pm** in the Airport Conference Room.

This document provides all of the information that is required to be presented at that

meeting as part of the consultation with air carriers.

It includes the following:

1. A description of the projects.
2. An explanation of the need for the projects (justification).
3. A detailed financial plan for the projects, including (1) the estimated project costs, (2) the anticipated total amount of PFC revenue that would be used to finance the projects, and (3) the sources and amounts of other funds, if any, needed to finance the projects.

This document is divided into two main sections: Description of Projects and Financial Plan.

## **REQUEST THAT A CLASS OF CARRIER NOT BE REQUIRED TO COLLECT PFCs**

Subsection 11 of FAR Part 158 permits the Airport to request that a class of air carriers or foreign air carriers not be required to collect PFCs. Such a class is one that constitutes no more than 1% of the total number of passengers enplaned annually at the airport at which the PFC is imposed. The Airport intends to request that On Demand Air Taxi Commercial Operations (ATCO) be exempt from collecting PFCs. This class of carrier at Burlington International Airport represents 0.10% of total passengers enplaned annually as recorded on FAA Form 1800-31.

## **AIR CARRIERS REQUIREMENTS**

In conformance with Section 158.23, following the meeting of **September 27, 2012**, each carrier has until **October 27, 2012** to provide the Airport with a written certification of its agreement or disagreement with the proposed project. A certification of disagreement must contain the reasons for such disagreement. The absence of such reasons shall void certification of disagreement. If a carrier fails to provide the Airport with certification of agreement or disagreement with the proposed project by **October 27, 2012**, the carrier is considered to have certified its agreement.

# **PROJECT DESCRIPTIONS**

**1. PURCHASE SNOW REMOVAL EQUIPMENT**

**DESCRIPTION**

This project includes the purchase of two 20 foot long snow plows intended to remove snow from the airfield pavement surfaces. No carrier vehicle will be purchased at this time.

**JUSTIFICATION AND OBJECTIVE**

The airport maintains a fleet of snow removal equipment in order to comply with the guidance and standards contained in FAA Advisory Circular 150/5200-30C AIRPORT WINTER SAFETY AND OPERATIONS and the Snow and Ice Control Plan required by Federal Aviation Regulations (FAR) Part 139 for certificated airports.

The two plows will be replacements for old rollover plows that are over 10 years old.

The airport has implemented a Maintenance Equipment Replacement Program (MERP) designed to schedule replacement of the most critical snow removal equipment over time as the recognized live expectancy of a piece of snow removal equipment is 10 to 15 years. This is in agreement with FAA’s policy of replacing vehicles every ten years or so.

Calculations of the required pieces of snow removal equipment for Priority One areas are attached as Appendix A.

**ESTIMATED PROJECT COST**

Snow Plows@ \$35,000 each.....	\$70,000
Pay-as-you-go .....	\$70,000
Loan Capital .....	\$0
Loan Financing & Interest .....	\$0
Total Cost Project 1 .....	\$70,000

**PROPOSED SCHEDULE**

Estimated Project Implementation Date:.....August 1, 2012  
Estimated Project Completion Date: .....July 1, 2013

**APPENDIX A**

**SNOW REMOVAL EQUIPMENT JUSTIFICATION**

Burlington International Airport  
Priority 1 Areas for snow removal

<b>Pavement Area</b>	<b>Area (SF)</b>
Runway 15-33	1,249,279.39
Taxiway G	515,561.53
Taxiway H	89,715.66
Taxiway A	379,203.81
Taxiway C	351,581.79
Taxiway K	155,337.24
Terminal Ramp	512,543.88
ARFF to Runway	175,704.69
	<hr/>
	3,428,927.99 SF
Use:	3,428,900.00

Per 150/5200-30, Paragraph 17, BTV  
must clear 1" of snow in 1/2 hour

**BURLINGTON INTERNATIONAL AIRPORT  
PROPOSED SNOW REMOVAL EQUIPMENT**

Two - 20' displacement plows

To replace equipment purchased AIP-32 in 1997:

International Rollover LH Wing

The airport is eligible for 4 plows at least 24' long.

## DISPLACEMENT PLOW

### Assumptions:

Equipment Efficiency = 75%  
Snow Depth = 1 inch  
Snow Density = 25#/CF  
Clearance time = 30 minutes  
Operating Speed = 30mph  
Priority 1 area = 3,428,900 SF  
rotary plow capacity = 4000 tons/hr  
Plow angle = 30 °

### Effective blade:

$$= \frac{4000 \times .75}{1 \times 30 \times 30 \times .75} \times 4.545$$

$$eb = 20.2 \text{ FT}$$

### Actual blade:

$$\frac{20.2}{\cos 30^\circ} = 23.3$$

Each rotary plow should be supplemented with two displacement plows.  
Therefore, BTV is eligible for 4 displacement plows at least 24' long.  
Currently, the airport has 2 plows - 1 @ 26' & 1 @ 22'

**BURLINGTON INTERNATIONAL AIRPORT  
EXISTING SNOW REMOVAL EQUIPMENT LESS THAN 10 YEARS OLD**

YEAR PURCHASED	VEHICLE NUMBER	VEHICLE DESCRIPTION	Age Years	AIP/PFC
		PLOWS		
2003	T-3	Oshkosh H Rollover LH/RH Wing - 26'	7	AIP-50
2010		Oshkosh H Rollover LH/RH Wing - 22'	2	PFC 11-05-C-00-BTV
		SWEEPERS		
2003	T-7S	Tow Behind Sweeper -16'	8	AIP-45
2010		High Speed Sweeper - 18'	2	PFC 11-05-C-00-BTV

Note: The airport currently has no blowers less than 10 years old.

## 2. TERMINAL BUILDING RENOVATIONS

### PROJECT BACKGROUND

The 2011 PFC application continued the expansion and renovations in the terminal that began in 1998. At this time, the airport proposes to continue renovations in the terminal. Included in this project application are:

- a. Replace a Portion of the Terminal Roof
- b. Replace Gate 1A Walkway
- c. Upgrade Restrooms - North Concourse
- d. Replace Elevator (South End)
- e. New Boarding Bridge (Gate 11)
- f. Replace Boilers in Main Terminal

#### **a. Replace Terminal Roof**

##### **Description:**

This project will replace the terminal roof in the main area of the terminal building. This part of the terminal is the oldest portion of the building, located at the center of the terminal. The roof is approximately 30 years old and will be replaced with rigid insulation under a modified polymer applied roofing system.

##### **Justification and Objective:**

The existing roofing materials were placed on top of the old roofs so locating leaks has become virtually impossible. The underlying insulation is constantly soaked because of the layered roof structure.

#### **b. Replace Gate 1A Walkway**

##### **Description:**

This project includes the replacement of a covered walkway that serves as Gate 1A. The existing walkway was constructed in 2004 out of wood framing with particle board exterior. It is approximately 50' long and 6' wide. A new walkway will be constructed of metal stud with plywood, covered with a metal siding exterior and will be approximately the same size.

##### **Justification and Objective:**

The existing walkway was intended to be a temporary structure but has developed into an integral part of the airport's gate system as it helps direct passengers from gate 1A to aircraft for ground level boarding. Prior to the temporary walkway, people were having

a problem locating the door which also was adjacent to the baggage drive through and when left open invited passengers in as a way to get to the baggage area. The existing particle board is deteriorating due to weather and should be replaced.

**c. Upgrade Restrooms - North Concourse**

**Description:**

This project is located in the secure area adjacent to the second floor holding room. The bathrooms were constructed in 1985 and need to be replaced. The bathrooms will include new energy and water efficient fixtures, new walls, floors, restroom partitions that are sturdy low maintenance/low bacterial materials.

**Justification:**

The existing bathrooms no longer comply with the current ADA codes and this project will correct that non-compliance. The new energy efficient fixtures will continue the airport's energy efficiency program.

**d. Elevator Replacement (South End)**

**Description:**

The elevator at the south end of the terminal is located adjacent to the airline ticket counters. The elevator is old, installed in 1967, and will no longer pass inspection so it cannot be used. The elevator currently goes from the basement to the second floor. This project will replace the elevator and will run from the basement to the roof of the terminal. The public will be locked out of any operations to the basement or the roof.

**Justification:**

This elevator is not currently accessible to the public but this project will reconfigure the area of the terminal so that the elevator can be used by the public for access between the first and second floors of the terminal. The airport currently has 4 public access elevators, however, they are located in the central portion of the terminal and the north end of the building. This elevator will provide access between the first and second floors at the south end of the terminal.

**e. New Boarding Bridge (Gate 11)**

**Description:**

Gate 11 is located on the first floor of the south concourse. It currently has a passenger loading bridge that will be relocated to another gate. Currently there are no boarding bridges on gates 1, 2, 7, and 12. The new bridge will be permanently attached at one end by a pivot (or rotunda) to the terminal building and have the ability to swing left or

right. The cab, located at the end of the loading bridge, can be raised or lowered, extended or retracted, and will pivot in order to accommodate aircraft of different sizes. The bridge will be provided with an accordion-like canopy, allowing the bridge to dock with aircraft with differing contours. The bridge also provides a weather-proof seal, protecting passengers from inclement weather.

**Justification:**

The aircraft that currently use Gate 11 are not compatible with the existing boarding bridge. Some of the aircraft doors that use the existing bridge at Gate 11 are much lower than the lowest point of the floor of the bridge, leaving a step down of almost one foot creating a dangerous situation for passengers. The new bridge will be more compatible with more aircraft.

**f. Replace Boilers in Main Terminal**

**Description:**

There are four (4) boilers that serve the central portion of the terminal building. Two were installed in 1972 and are located in the basement, having an output of 1800 MBH (1 MBH = 1000 BTU’s/hour). Two additional boilers with an output of 1200 MBH were installed in the penthouse in 1985 during a terminal building renovation project. All four are natural gas boilers. Repairs have been done over the years but both sets are reaching the end of their useful life.

**Justification:**

The existing boilers are well over 27 years old, making repairs difficult since parts are hard to find for equipment of this age. The current boilers are only 65% efficient according to an energy audit performed by Hallam ICS in 2009. The report recommended that the 4 boilers be replaced with 2 larger, high efficiency boilers.

**ELIGIBILITY**

<b>Project</b>	<b>Eligible (%)</b>	<b>Ineligible (%)</b>
a. Replace a Portion of the Terminal Roof	68.0%	32.2%
b. Replace Gate 1A Walkway	100.0%	0.0%
c. Upgrade Restrooms - North Concourse	100.0%	0.0%
d. Replace Elevator (South End)	50.0%	50.0%
e. New Boarding Bridge (Gate 11)	100.0%	0.0%
f. Replace Boilers in Main Terminal	68.0%	31.9%

A copy of the eligibility calculations for the Terminal Roof and the new boilers are attached. The elevator is considered only half eligible since the public will not have access to the basement or to the roof.

**ESTIMATED PROJECT COSTS**

**a. Replace Terminal Roof:**

**PFC Eligible:**

• Pay-as-you-go .....	\$0
• Loan Capital .....	\$1,020,000
• Loan Financing & Interest .....	\$237,570
Total Eligible.....	\$1,257,570

**PFC Ineligible:**

• Pay-as-you-go .....	\$0
• Loan Capital .....	\$480,000
• Loan Financing & Interest .....	\$111,797
Total Ineligible.....	\$591,797

Total Estimated Project Cost      \$1,849,367

**b. Replace Gate 1A Walkway**

**PFC Eligible:**

• Pay-as-you-go .....	\$100,000
• Loan Capital .....	\$0
• Loan Financing & Interest.....	\$0
Total Eligible.....	\$100,000

**PFC Ineligible:**

• Loan Capital .....	\$0
• Loan Financing & Interest .....	\$0
Total Ineligible.....	\$0

Total Estimated Project Cost ..... \$100,000

**c. Upgrade Restrooms, North Concourse**

**PFC Eligible:**

• Pay-as-you-go .....	\$250,000
• Loan Capital .....	\$0
• Loan Financing & Interest .....	\$0
Total Eligible.....	\$250,000

**PFC Ineligible:**

• Pay-as-you-go .....	\$0
• Loan Capital .....	\$0

• Loan Financing & Interest .....	\$0
Total Ineligible .....	\$0
Total Estimated Project Cost	\$250,000

**d. Elevator Replacement (South End)**

**PFC Eligible:**

• Pay-as-you-go .....	\$200,000
• Loan Capital .....	\$0
• Loan Financing & Interest .....	\$0
Total Eligible.....	\$200,000

**PFC Ineligible:**

• Pay-as-you-go .....	\$200,000
• Loan Capital .....	\$0
• Loan Financing & Interest .....	\$0
Total Ineligible .....	\$200,000

Total Estimated Project Cost \$400,000

**e. New Boarding Bridge (Gate 11)**

**PFC Eligible:**

• Pay-as-you-go .....	\$0
• Loan Capital .....	\$806,250
• Loan Financing & Interest .....	\$99,280
Total Eligible.....	\$905,530

**PFC Ineligible:**

• Pay-as-you-go .....	\$0
• Loan Capital .....	\$0
• Loan Financing & Interest .....	\$0
Total Ineligible .....	\$0

Total Estimated Project Cost \$905,530

**f. Replace Boilers in Main Terminal**

**PFC Eligible:**

• Pay-as-you-go .....	\$0
• Loan Capital .....	\$850,000
• Loan Financing & Interest .....	\$98,470
Total Eligible.....	\$948,470

**PFC Ineligible:**

• Pay-as-you-go .....	\$0
• Loan Capital .....	\$400,000
• Loan Financing & Interest .....	\$46,347
Total Ineligible .....	\$446,347

	Total Estimated Project Cost	\$1,394,817
Total Eligible Cost.....		\$3,661,570
Total Ineligible Cost .....		\$1,238,144
Total Cost Project 1 .....		\$4,899,714

**SCHEDULE**

Estimated Project Implementation Dates:

- a. Replace Terminal Roof ..... June 1, 2013
- b. Replace Gate 1A Vestibule..... September 1, 2012
- c. Upgrade Restrooms, North Concourse .....January 1, 2013
- d. Replace Elevator (South End) .....December 1, 2012
- e. Replace Boilers in Main Terminal .....May 1, 2012

Estimated Project Completion Dates:

- a. Replace Terminal Roof ..... November 1, 2013
- b. Replace Gate 1A Vestibule..... November 1, 2012
- c. Upgrade Restrooms, North Concourse .....May 1, 2013
- d. Replace Elevator (South End) .....June 1, 2013
- e. Replace Boilers in Main Terminal ..... July 1, 2012

## Burlington International Airport

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### Energy Conservation Measure

ECM M-7

**Description:** Boiler Replacement to high efficient boilers.

(2) Boilers (1972) in basement at 1800 MBH output, (2) boilers in penthouse (1985) at 1200 MBH output. Some repairs have been done and both sets are reaching the end of useful life.

**Recommendation:** Provide new high efficiency 3000 MBH boilers, piping/pumps, stack, etc.

Basically, replace existing (4) large boilers, with (2) larger boilers including hot water pumps and piping and stacks.

Both set of boilers are of the 65% efficiency type (atmospheric gas) vs. say 85% efficient today.

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### Installed Cost Data

(2) new 85% efficient boilers (Buderus type with modulating burner):	\$105,000.
(2) new hot water pumps and piping to tie both boiler rooms together:	\$ 24,000.
Stacks:	\$ 18,000.
Controls:	\$ 8,000.
Commissioning:	\$ 6,000.
Design:	\$ 16,000.
Total:	\$177,000.

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### Energy Data:

Gas	
Energy Savings (MMBTU/YR)	20,000 therms/yr.
Energy Cost Savings (\$)	\$23,000/yr
Simple Payback Period (YRS)	7.7 yrs.

**APPENDIX B**

**TERMINAL ROOF AND BOILER JUSTIFICATIONS**

Burlington International Airport  
Roof Eligibility -2nd floor

Public Space:

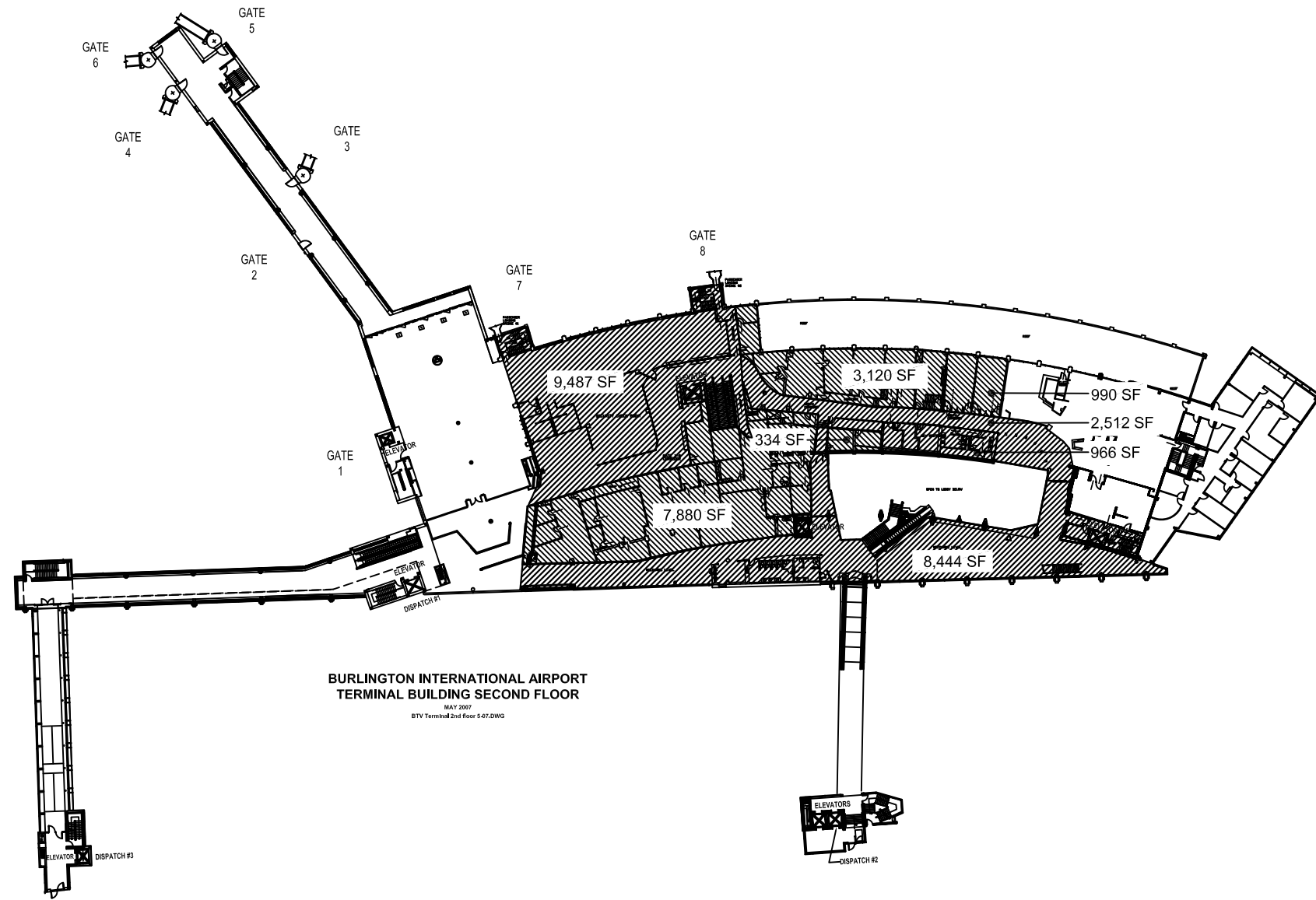
Floor	Room	Area (SF)
2	corridor, mezzanine, restrooms, holdroom	25,895
		25,895

Non-public or lease space

2	Weather Bureau/police	7,880
2	admin offices/conference rooms	4,110
2	misc. offices/storage (opposite admin)	334
		12,324

Total public space	25,895	67.8%
Total non-public space	12,324	32.2%
Total project area	38,219	

**Per FAA regional office, use 68% eligible**



BURLINGTON INTERNATIONAL AIRPORT  
TERMINAL BUILDING SECOND FLOOR  
MAY 2007  
BTV Terminal 2nd floor 5.07.DWG

LEGEND



PUBLIC SPACE



NON-PUBLIC SPACE

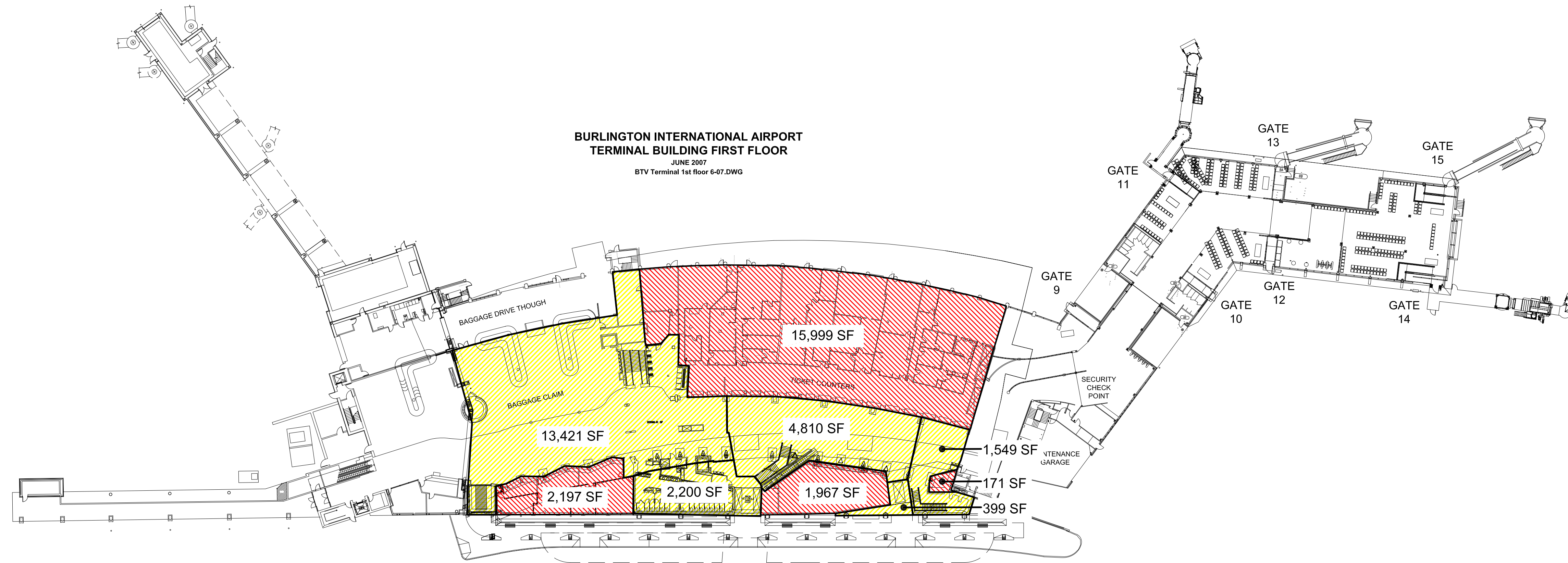
BURLINGTON INTERNATIONAL AIRPORT SOUTH BURLINGTON, VERMONT		HTA PROJ. No.: 037746	
TERMINAL BUILDING SECOND FLOOR PLAN		EXHIBIT NO. <b>2</b>	
SCALE 1"=40'		DATE JULY 2012	DES. BY KJF
Hoyle, Tanner & Associates, Inc.		DR. BY DWH	CHKD. BY KJF
150 Dow Street Manchester, NH 03101-1227 Tel 603-669-5555 Fax 603-669-4168 Web Page: www.hoyletanner.com <small>Hoyle, Tanner &amp; Associates © 2011</small>		DRAWING NAME BTV-EXHIBIT-1	REVISIONS
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Burlington International Airport  
Boilers Eligibility

		Area (SF)	Estimated Ceiling Height (FT)	Volume (CF)
Public Space:				
1	baggage claim and queuing area	13,421	12	161,052
1	ticket counter queuing area open to above	4,810	24	115,440
1	ticket counter queuing area not open to above	1,549	12	18,588
1	south entry	399	8	3,192
1	first floor restrooms	2,200	8	17,600
		<u>22,379</u>		<u>315,872</u>
2	corridor	2,512	10	25,120
2	mezzanine	8,444	12	101,328
2	bathrooms	966	8	7,728
2	holdroom	9,487	12	113,844
		<u>21,409</u>		<u>248,020</u>
Non-public or lease space:				
1	gift shop	1,967	8	15,736
1	rental car spaces	2,197	8	17,576
1	airline ticket counter	15,999	8	127,992
1	coffee shop	171	12	2,052
		<u>20,334</u>		<u>163,356</u>
2	Weather Bureau/police	7,880	8	63,040
2	admin offices	3,120	8	24,960
2	conference rooms	990	10	9,900
2	misc. offices/storage (opposite admin)	334	8	2,672
		<u>12,324</u>		<u>100,572</u>
	Total public space	563,892		68.1%
	Total non-public space	263,928		31.9%
	Total project area	<u>827,820</u>		

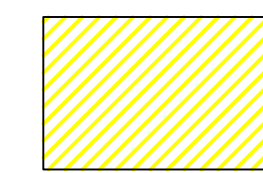
**Per FAA regional office, use 68% eligible**

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**BURLINGTON INTERNATIONAL AIRPORT  
TERMINAL BUILDING FIRST FLOOR**  
JUNE 2007  
BTV Terminal 1st floor 6-07.DWG

LEGEND



PUBLIC SPACE



NON-PUBLIC SPACE

BURLINGTON INTERNATIONAL AIRPORT  
SOUTH BURLINGTON, VERMONT  
**TERMINAL BUILDING ENERGY PROJECTS  
FIRST FLOOR PLAN**

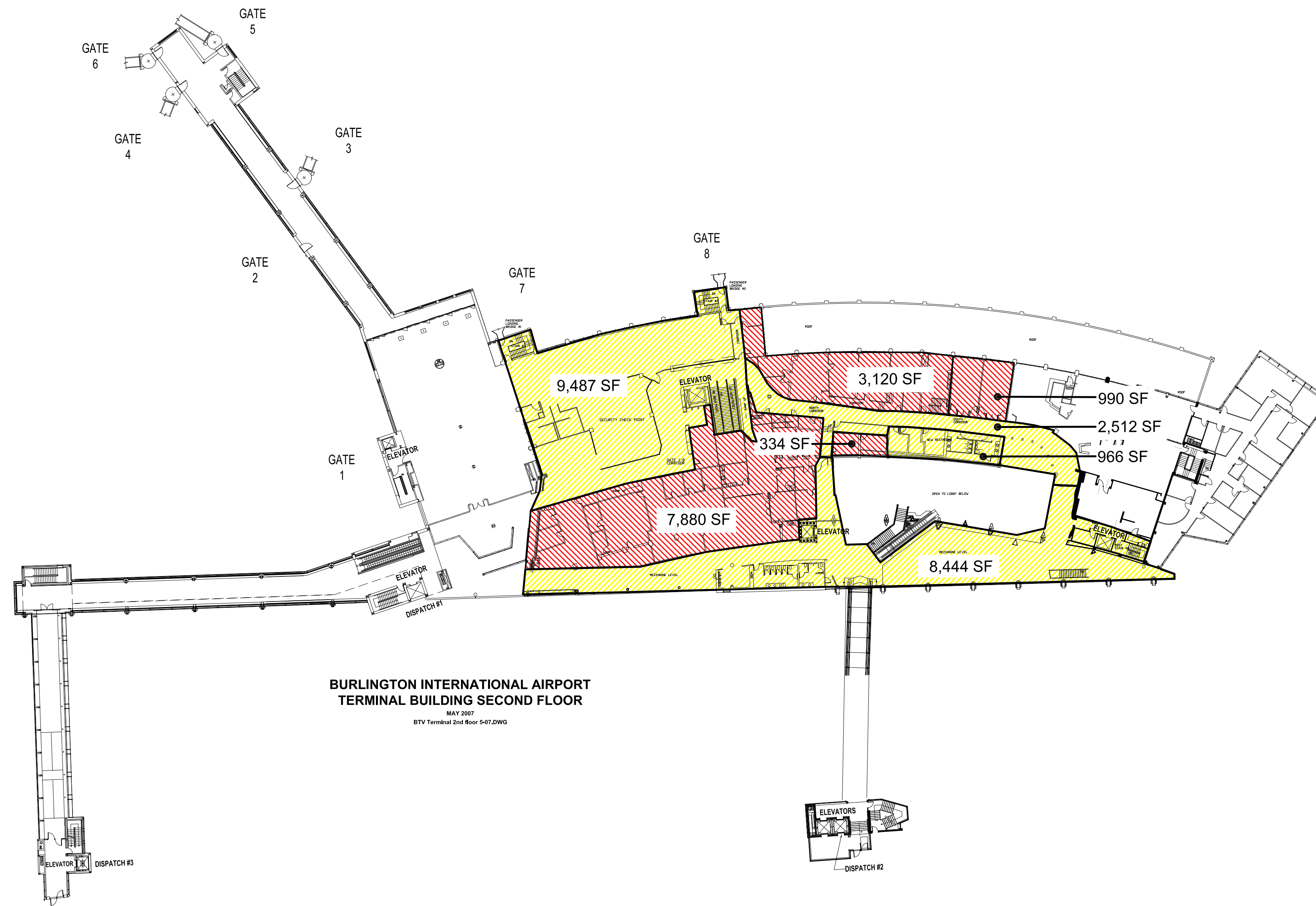
HTA PROJ. No.: 037746

EXHIBIT NO.

1

SHEET 1 OF 2

<p><b>Hoyle, Tanner &amp; Associates, Inc.</b> 150 Dow Street Manchester, NH 03101-1227 Tel 603-669-5555 Fax 603-669-4168 Web Page: <a href="http://www.hoyletanner.com">www.hoyletanner.com</a> <small>Hoyle, Tanner &amp; Associates © 2011</small></p>		<p>DRAWING NAME BTV-EXHIBIT-1</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>REV. NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV. NO.	DATE	DESCRIPTION	BY				
REV. NO.	DATE	DESCRIPTION	BY								
<p>DES. BY KJF</p>	<p>DR. BY DWH</p>	<p>CHKD. BY KJF</p>	<p>DATE JULY 2012</p>								
<p>SCALE 1"=40'</p>		<p>DATE JULY 2012</p>									



BURLINGTON INTERNATIONAL AIRPORT  
 TERMINAL BUILDING SECOND FLOOR  
 MAY 2007  
 BTV Terminal 2nd Floor 5-07.DWG

LEGEND



PUBLIC SPACE



NON-PUBLIC SPACE

BURLINGTON INTERNATIONAL AIRPORT  
 SOUTH BURLINGTON, VERMONT  
 TERMINAL BUILDING ENERGY PROJECTS  
 SECOND FLOOR PLAN

HTA PROJ. No.: 037746

EXHIBIT NO.

2

SHEET 2 OF 2

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DES. BY: KJF  
 DR. BY: DWH  
 CHKD. BY: KJF

DATE: JULY 2012

SCALE: 1"=40'

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

DRAWING NAME: BTV-EXHIBIT-1

### 3. TAXIWAY B RECONSTRUCTION

#### DESCRIPTION

This project will consist of the design and reconstruction of a portion of Taxiway B. Taxiway B is an exit taxiway from Runway 15-33 west to the intersection with Runway 1-19, approximately 800' long and 75' wide. A portion of this taxiway, to the limit of the runway safety area, was reconstructed during the Runway 15-33 reconstruction project in 2010. The intersection with Runway 1-19 will be reconfigured to accommodate access to Taxiway G, the partial parallel taxiway to Runway 15-33. This project will also include subsurface drainage, new edge lights and signs, pavement marking, and turf.

A Stormwater Discharge Permit and the ACT250 permit for the future Taxiway G connection between Taxiway C and Taxiway B was issued in conjunction with the 2010 Runway project. This also included the Taxiway B reconstruction and the new Taxiway G stub between Taxiway B and Taxiway A.

#### JUSTIFICATION

Taxiway B was originally constructed in 1962, was widened in 1968 to 50' wide, and overlaid in 1981 to increase pavement strength. Since the time of the last overlay, the portions of the taxiway that fall within the safety area of Runway 15-33 and Runway 1-19 have been reconstructed. The remainder of the taxiway has not received any additional construction or overlay and is showing signs of failure such as rutting of the pavement and alligator cracking which is typical of old pavement.

#### PROJECT COST

**PFC Funding:**

- Interest on Grant Anticipation Note ..... \$39,141
- BTV share of AIP Grant..... \$117,424

**Total PFC ..... \$156,565**

**Anticipated AIP FAA Funds: ..... \$2,642,040**

**Anticipated AIP State Share..... \$176,136**

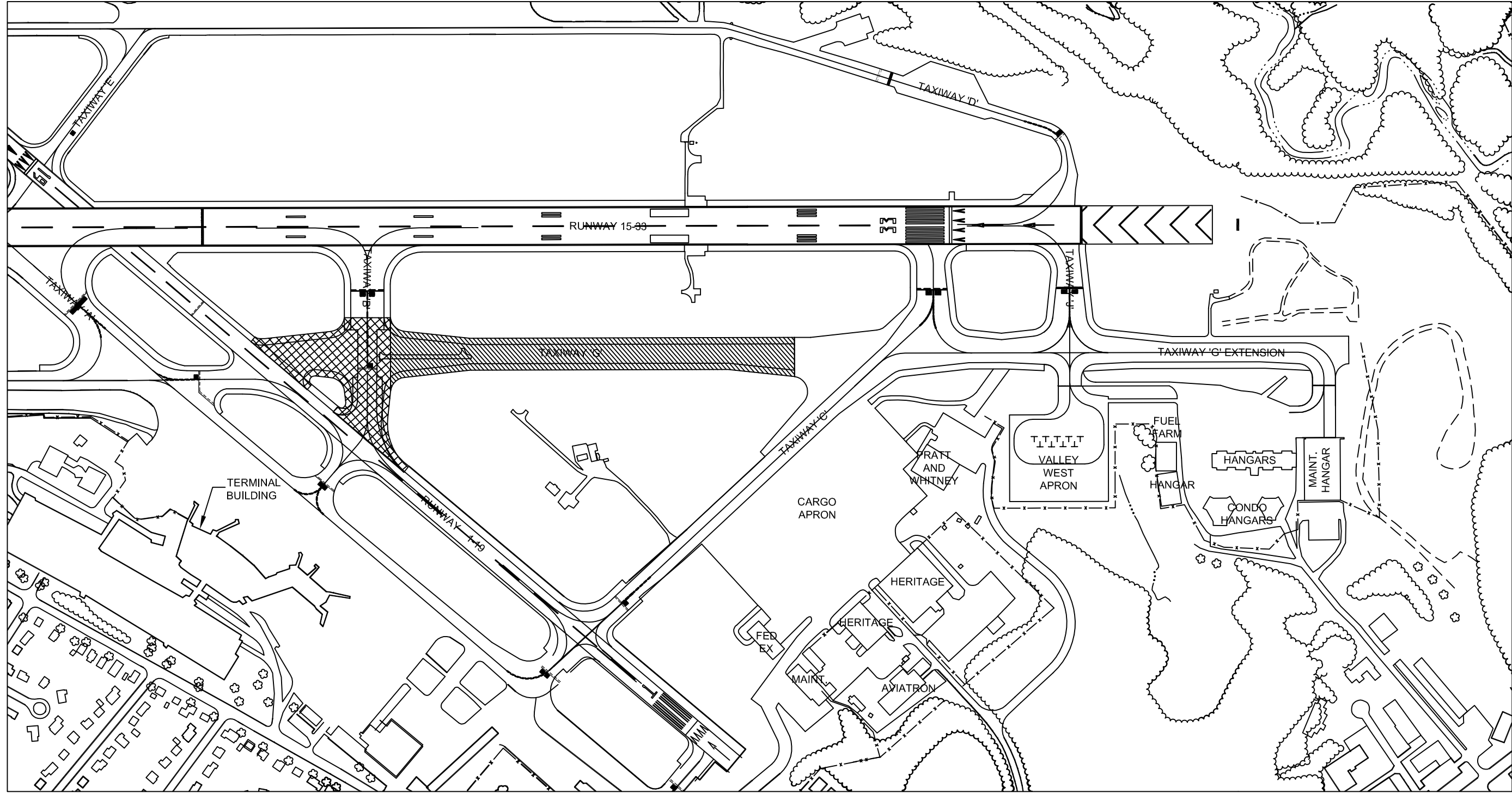
**Total Estimated Project Cost..... \$2,974,741**

#### SCHEDULE

Project Implementation Date ..... June 1, 2015

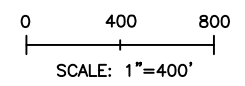
Project Completion Date..... May 1, 2016

Drawing name: H:\037746\037746\_VFC phasing plan.dwg Aug 27, 2012 - 9:58am



 TAXIWAY 'B' CONSTRUCTION

 TAXIWAY 'G' DESIGN



BURLINGTON INTERNATIONAL AIRPORT SOUTH BURLINGTON, VERMONT		SOUTH END DEVELOPMENT	
HTA PROJ. No.: 037746			
EXHIBIT NO. <div style="text-align: center; font-size: 2em;">1</div>			
SHEET 1 OF 1			
150 Dow Street Manchester, NH 03101-1227 Tel 603-669-5555 Fax 603-669-4168 Web Page: www.hoyletanner.com <small>Hoyle Tanner &amp; Associates © 2011</small>		DES. BY K.J.F.	DR. BY S.L.S.
DRAWING NAME PFC PHASING PLAN		CHKD. BY K.J.F.	DATE
REV. NO.	DATE	DESCRIPTION	BY

## 4. Design Taxiway G

### DESCRIPTION

This project will consist of the design of a portion of Taxiway G. This will continue the development of the taxiway system at the Airport and complete the parallel taxiway system to runway 15-33. It connects from existing taxiway C north to the intersection with runway 1-19 and existing taxiway G, approximately 3000' long and 75' wide. The project will also include subsurface drainage, new edge lights and signs, pavement marking, and turf.

A Stormwater Discharge Permit and the ACT250 permit for the future Taxiway G connection between Taxiway C and Taxiway B was issued in conjunction with the 2010 Runway project. This also included the Taxiway B reconstruction and the new Taxiway G stub between Taxiway B and Taxiway A.

### JUSTIFICATION

The objective of the project is to complete the parallel taxiway to runway 15-33. The need for this taxiway extension has been identified in several planning document updates including the 2006 Airport Layout Plan Update and again in the 2010 Master Plan Update. The full parallel taxiway will assist in keeping the general aviation and cargo operations out of the terminal area.

FAA considers a full parallel taxiway to be a basic part of an airport and is required by design standards. Burlington Airport has been operating for decades without a full parallel taxiway to the main runway. Currently aircraft that need to go from north to south (or south to north) on the airfield must taxi down runway 1-19 or taxiway A which is adjacent to the terminal apron, and then to Taxiway C. The full parallel taxiway will provide an alternative route for cargo and general aviation aircraft helping to reduce traffic through the terminal area.

### PROJECT COST

#### PFC Funding:

• Interest on Grant Anticipation Note .....	\$3,704
• BTV share of AIP Grant.....	\$11,111
<b>Total PFC .....</b>	<b>\$14,815</b>
<b>Anticipated AIP FAA Funds: .....</b>	<b>\$250,000</b>
<b>Anticipated AIP State Share.....</b>	<b>\$16,666</b>

**Total Estimated Project Cost..... \$281,481**

### SCHEDULE

Project Implementation Date ..... June 1, 2013  
Project Completion Date..... May 1, 2014

## **5. RECONSTRUCT CARGO APRON INCLUDING NEW GLYCOL COLLECTION AND TREATMENT SYSTEM**

### **DESCRIPTION**

This project is the reconstruction of the cargo apron located at the south end of the airport. The existing apron is approximately 45,000SY, consisting of 9" thick Portland Cement Concrete pavement constructed in 25' x 12.5' slabs in 1956. It is anticipated that the reconstruction will consist of the removal of the existing pavement, new base course material will be placed and compacted, and new 16" thick Portland cement concrete pavement will be constructed in 12.5' x 12.5' slabs to accommodate the aircraft that are anticipated to use the cargo apron in the future, as well as the aircraft that use it today. A small portion of the ramp, 700 SY, was reconstructed in 2009 and was approved in the previous PFC application (11-05-C-00-BTV).

This project also consists of the design and construction of a glycol collection and treatment system at the cargo ramp. Glycol is sprayed on aircraft to keep them from icing up before takeoff and early entry into the atmosphere. Without proper containment, glycol flows into drain systems and into local waterways. Glycol breaks down very quickly however during the degradation process it consumes large quantities of oxygen. This robs local fish and plant life of essential nutrients.

### **JUSTIFICATION**

The existing concrete pavement is experiencing structural failure and therefore not adequate for the current aircraft using the area. The new pavement will be designed in accordance with the latest FAA design criteria. This area of the airport was originally used by the military and the concrete pavement was not designed to accommodate the type of aircraft currently operating in this area or the frequency with which they are being operated.

The existing concrete slabs have cracked significantly in-line with the wheel path of the main gear of the aircraft taxiing on the ramp from Taxiway C. The type and location of the cracking indicates that the slabs are failing because the slabs are not thick enough to support the loads applied by the aircraft.

In March of 1992, US Air flight 407 crashed on takeoff at New York's LaGuardia Airport during a winter storm due to inadequate deicing. In the aftermath, the Federal Aviation Administration (FAA) imposed more stringent requirements on deicing activities in order to increase the margin of safety for aircraft operating during winter conditions. These revised FAA protocols (14 CFR part 121) increased the quantities of deicer used by airports. Consequently, this increase has led to greater levels of deicer in the waterways.

The EPA has classified this material as a regulated industrial process wastewater under the NPDES 40 CFR Part 122. As a result, disposal of spent deicing fluid has become both an environmental and economic liability for airports.

**PROJECT COST**

**PFC Funding:**

• Interest on Grant Anticipation Note .....	\$135,452
• BTV share of AIP Grant.....	\$406,357
<b>Total PFC .....</b>	<b>\$541,809</b>
<b>Anticipated AIP FAA Funds: .....</b>	<b>\$9,143,040</b>
<b>Anticipated AIP State Share.....</b>	<b>\$609,536</b>

**Total Estimated Project Cost..... \$10,294,385**

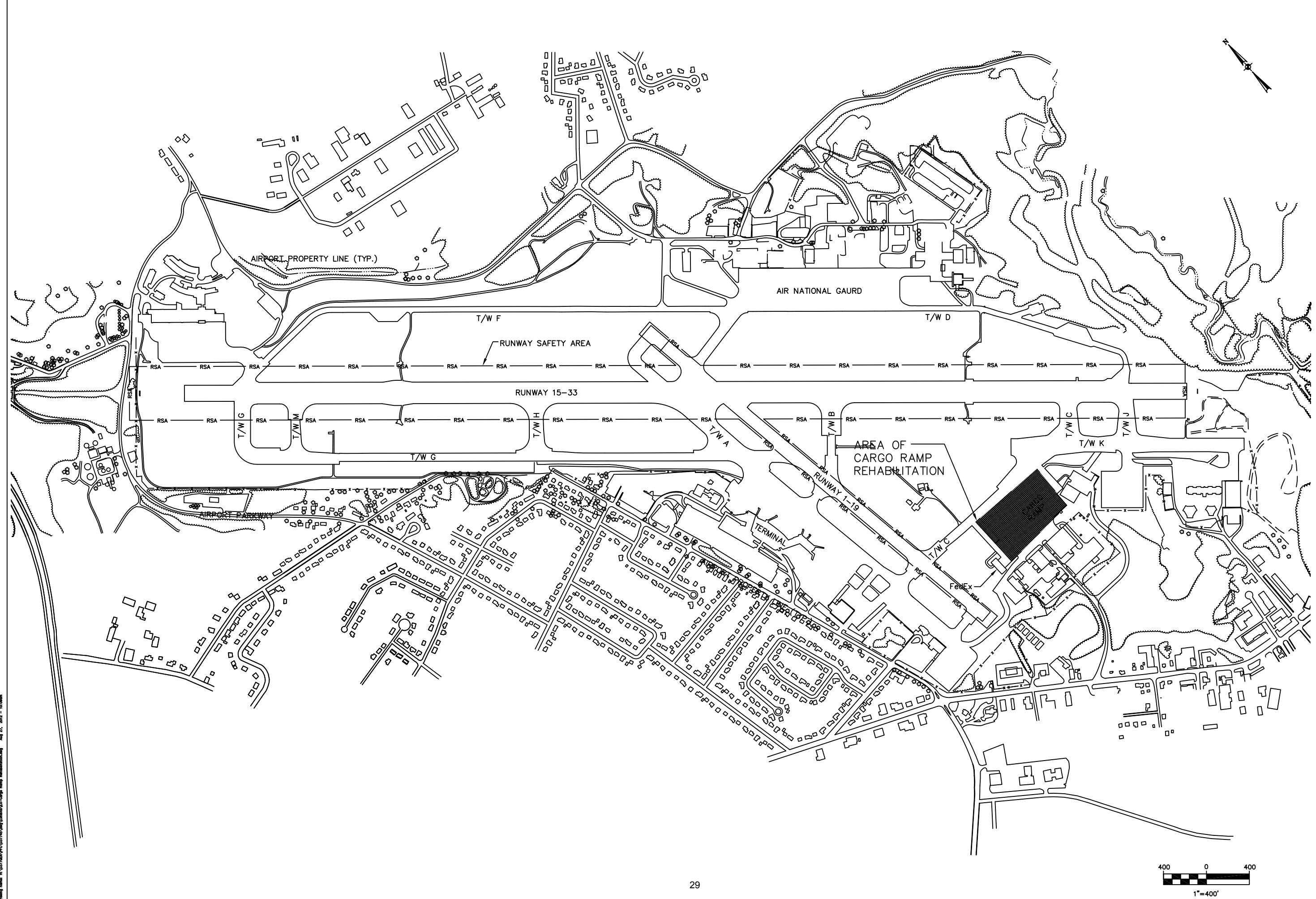
The reconstruction will be phased to accommodate available funding. The portions in the worse condition will be reconstructed first. Currently, the design of the entire apron, and the construction of the glycol treatment system will be funded in 2012. The FAA anticipates issuing the following grants over the next few years:

FY 2012	\$2,043,040
FY 2013	\$1,000,000
FY 2014	\$2,600,000
FY 2016	\$3,500,000

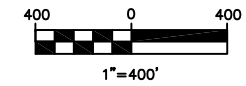
Note: Amounts shown are for the federal share only and are assumed to be 90% of the total project cost.

**SCHEDULE**

Project Implementation Date ..... August 1, 2012  
 Project Completion Date..... May 1, 2017



Drawing name: H:\2007\Burlington\2007\Burlington-EX-Ramp-Rehab.dwg Aug 27, 2007 10:08am



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BURLINGTON INTERNATIONAL AIRPORT  
 SOUTH BURLINGTON, VERMONT  
**REHABILITATE  
 CARGO RAMP**

REV. NO.	DATE	BY	DESCRIPTION

PROJ. No.: 037745  
 FILE NAME: EX-RampRehib

DRAWING NO.

**EX.1**

SHEET 1 OF 1

DESIGNED BY: MTO  
 DRAWN BY: MTO  
 CHECKED BY: KJF

SCALE: 1"=400'  
 DATE: MARCH 2011

DO NOT SCALE DRAWING

## **6. UPDATE NOISE EXPOSURE MAP (AIP-91)**

### **DESCRIPTION**

This project will consist of a Code of Federal Regulations (CFR) Part 150 noise exposure map (NEM) update for use in reviewing the status of, and impact on, the approved noise compatibility program (NCP). It will also be used to compare the Part 150 NEM with the baseline contours prepared for the draft Environmental Impact Statement prepared for the basing of F-35A aircraft at Burlington International Airport.

The Plan update will also analyze the NEM results and recommendations from the 2006 Part 150 NEM update conducted under AIP-60. Upon review, the new NEM will be used to update the NCP and guide land acquisition and other policies affecting the noise impacted areas adjacent to the airport.

### **JUSTIFICATION**

The airport conducted a full Part 150 noise compatibility study (AIP-10) in 1989. The results of this study were forwarded to the Federal Aviation Administration which found that the Noise Exposure Maps (NEM) were in compliance with Part 150 requirements. Further, this study resulted in a series of recommendations which were in a Noise Compatibility Program approved by the FAA in a Record of Approval dated March 27, 1990.

In 1997, the Airport updated its Airport Layout Plan under AIP-31 and as part of that project also prepared and submitted revised NEMs with contours for 1997 and anticipated for 2002.

During the update of the Airport's Master Plan under AIP-52 it was felt that the Airport's Noise Exposure Maps (NEMs) and resulting Noise Compatibility Plan also needed updating. The NEM update was subsequently included in AIP-60 which was completed in August, 2006. That study included the recommendation that the City proceed with a follow-on NCP update which was included in funding under an AIP grant (AIP-67) in May 2007. The result of this grant was an update to the NCP which was approved by the FAA on June 23, 2008.

On April 13, 2012, the United States Air Force released its F-35A Operational Basing Draft Environmental Impact Statement which included basing 18 F-35A aircraft at Burlington International Airport. As a part of that release, baseline noise conditions were included that indicated that existing noise conditions were much higher than as shown in the 2006 NEM created by the Airport. In discussions with the Vermont Air National Guard on April 19, the Airport was informed that the platform for the current operations at BTV using F-16 aircraft had changed since 2006 so that aircraft were now taking off with different throttle settings and full afterburners. This would have a significant impact on the NEM calculations.

This study is for the purpose of updating the NEM documentation and resulting noise maps to reflect the changes in operating characteristics to enable the airport to compare its NEM with the baseline information provided by the Air Force to insure an equitable comparison..

**PROJECT COST**

**PFC Funding:**

- Interest on Grant Anticipation Note ..... \$3,039
- BTV share of AIP Grant..... \$7,368
- Total PFC ..... \$10,407**

**AIP FAA Funds: ..... \$165,780**

**AIP State Share..... \$11,052**

**Total Estimated Project Cost..... \$187,239**

**SCHEDULE**

Project Implementation Date ..... August 1, 2012

Project Completion Date..... July 31, 2013

## 7. PFC APPLICATION COSTS

### DESCRIPTION

The airport administration costs are those spent in attending meetings and providing additional information for the application process.

The professional services are for the work involved in assisting with the preparation of this application. This includes the preparation of supporting documentation such as project sketches; eligibility calculations for terminal renovations; financial plans; determination of anticipated collection start dates and anticipated collection expiration dates; narratives of justification and objective for the projects; preparation of an airline information packet; attendance at consultation meeting with the airlines; and determination of carriers that were excluded from the collection of PFC's. The projects include:

1	Purchase Snow Removal Equipment
2	Terminal Building Renovations a. Replace Terminal Roof b. Gate 1A Walkway c. Upgrade Restrooms - North Concourse d. Elevator Replacement (South End) e. New Boarding Bridge (Gate 11) f. Replace Boiler in Main Terminal
3	Taxiway B Reconstruction (local share)
4	Design Taxiway G
5	Reconstruct Cargo Apron Including New Glycol Collection and Treatment System (local share)
6	Update NEM -2012 (local share)
7	PFC Application Costs a. Airport Admin costs b. 2012 PFC Application Costs c. Amendment 10-04-C-01-BTV

An amendment to application 10-04-C-00-BTV was prepared in 2011 for the impose and use authority to resume collection of the bond costs previously approved by the FAA for which collection authority had expired.

**JUSTIFICATION**

The Owner has requested assistance with the preparation of documentation, cost estimates of projects, graphics, assistance with airline consultation, and general matters relating to the application to collect PFC's.

**ESTIMATED GROSS PROJECT COST**

Airport Administration Costs .....	\$30,000
PFC Application Costs.....	\$43,500
Amendment 10-04-C-01-BTV .....	\$11,800
Total Project Cost .....	\$85,300

**PROPOSED SCHEDULE**

Estimated Project Implementation Date .....	December 1, 2011
Estimated Project Completion Date .....	January 1, 2013

# **FINANCIAL PLAN**

## Financial Plan

Exhibit A-1 shows a Summary of Project Costs for this PFC application at Burlington International Airport. The amount to be included in this impose and use application is \$4,540,460.

Exhibit A-2 presents a cash flow of the projects indicating the project costs per year, the bond or loan interest and debt services paid, plus the net collected PFC revenues.

In accordance with Section 158.23(b)(3)(ii), Exhibit A-3 presents the calculation of the net PFC revenue that is anticipated to be collected by the City and used to pay back the bonds and loans for the PFC projects as well as the pay-as-you-go projects. Interest earned on the PFC revenue was based on annual bond and loan payments minus the annual PFC collection at an estimated interest rate of 0.5%. It is estimated that 91.75% of the projected enplaned passengers will be required to pay a PFC. The air carrier fee is calculated at \$0.11 per qualifying passenger.

PFC collections began on April 1, 1997 at rate of \$3.00 per passenger. Collections were increased to \$4.50 on September 1, 2003. Collections for this application will begin on January 1, 2016 at the rate of \$4.50 per enplaned passenger. The anticipated expiration date for this PFC application is June 1, 2017.

**EXHIBIT A-1**  
**2012 APPLICATION**  
**BURLINGTON INTERNATIONAL AIRPORT**  
**PROJECT COST SUMMARY**

Project No.	Description	Total Project Cost	Eligible Pay-As-You-Go	Eligible Loan Principal	Eligible Loan Interest	Interest on Grant Anticipation Note	AIP Local Share	Total PFC Eligible	AIP Federal Share	AIP State Share	Ineligible Pay-As-You-Go	Ineligible Loan Principal	Ineligible Loan Interest	Total PFC Ineligible
1	Purchase Snow Removal Equipment (plows)	\$70,000	\$70,000					\$70,000						\$0
2	Terminal Building Renovations													
	a. Replace Terminal Roof	\$1,849,367	\$0	\$1,020,000	\$237,570			\$1,257,570	\$0	\$0		\$480,000	\$111,797	\$591,797
	b. Gate 1A Vestibule	\$100,000	\$100,000					\$100,000						\$0
	c. Upgrade Restrooms - North Concourse	\$250,000	\$250,000					\$250,000						\$0
	d. Elevator Replacement (South End)	\$400,000	\$200,000					\$200,000			\$200,000			\$200,000
	e. New Boarding Bridge (Gate 11)	\$905,530		\$806,250	\$99,280			\$905,530						\$0
f. Replace Boiler in Main Terminal	\$1,394,817		\$850,000	\$98,470			\$948,470				\$400,000	\$46,347	\$446,347	
	Total Project 1	\$4,899,714						\$3,661,570						\$1,238,144
3	Taxiway B Reconstruction (local share)	\$2,974,741				\$39,141	\$117,424	\$156,565	\$2,642,040	\$176,136				\$0
4	Design New Taxiway G	\$281,481				\$3,704	\$11,111	\$14,815	\$250,000	\$16,666				\$0
5	Reconstruct Cargo Apron Including New Glycol Collection and Treatment System (local share)	\$10,294,385				\$135,452	\$406,357	\$541,809	\$9,143,040	\$609,536				\$0
6	Update NEM -2012 (local share)	\$187,239				\$3,039	\$7,368	\$10,407	\$165,780	\$11,052				\$0
7	PFC Application Costs													
	a. Airport Admin costs	\$30,000	\$30,000					\$30,000						\$0
	b. 2012 PFC Application Costs	\$43,500	\$43,500					\$43,500						\$0
	c. Amendment 10-04-C-01-BTV	\$11,800	\$11,800					\$11,800						\$0
	Totals	\$18,792,860	\$705,300	\$2,676,250	\$435,320	\$181,336	\$542,260	\$4,540,466	\$12,200,860	\$813,390	\$200,000	\$880,000	\$158,144	\$1,238,144

**EXHIBIT A 2**  
**BURLINGTON INTERNATIONAL AIRPORT**  
**PFC PROGRAM**  
**2012 APPLICATION CASH FLOW**

PROJ	DESCRIPTION	CY 2016	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025	CY 2026	TOTAL
	CASH BALANCE: (BEGIN CY)		\$1,076,060	\$2,181,332	\$1,684,774	\$1,188,216	\$691,658	\$565,902	\$440,146	\$314,390	\$188,634	\$62,878	
	Bond/Loan Infusion	\$2,676,250											\$2,676,250
1	Purchase Snow Removal Equipment (plows)	(\$70,000)											(\$70,000)
	Terminal Building Renovations												
	a. Replace Terminal Roof	(\$1,082,878)	(\$125,756)	(\$125,756)	(\$125,756)	(\$125,756)	(\$125,756)	(\$125,756)	(\$125,756)	(\$125,756)	(\$125,756)	(\$62,878)	(\$2,277,560)
	b. Gate 1A Vestibule	(\$100,000)											(\$100,000)
	c. Upgrade Restrooms - North Concourse	(\$250,000)											(\$250,000)
	d. Elevator Replacement (South End)	(\$200,000)											(\$200,000)
	e. New Boarding Bridge (Gate 11)	(\$987,355)	(\$181,105)	(\$181,105)	(\$181,105)	(\$181,105)							(\$1,711,775)
	f. Replace Boiler in Main Terminal	(\$1,039,697)	(\$189,697)	(\$189,697)	(\$189,697)	(\$189,697)							(\$1,798,485)
3	Taxiway B Reconstruction (local share)	(\$156,565)											(\$156,565)
4	Design New Taxiway G	(\$14,815)											(\$14,815)
5	Reconstruct Cargo Apron Including New Glycol Collection and Treatment System (local share)	(\$541,809)											(\$541,809)
6	Update NEM -2012 (local share)	(\$10,407)											(\$10,407)
	PFC Application Costs												
	a. Airport Admin costs	(\$30,000)											(\$30,000)
	b. 2012 PFC Application Costs	(\$43,500)											(\$43,500)
	c. Amendment 10-04-C-01-BTV	(\$11,800)											(\$11,800)
	TOTAL ANNUAL COST:	(\$4,538,826)	(\$496,558)	(\$496,558)	(\$496,558)	(\$496,558)	(\$125,756)	(\$125,756)	(\$125,756)	(\$125,756)	(\$125,756)	(\$62,878)	(\$4,540,466)
	NET COLLECTED PFC (CY):	\$2,938,636	\$1,601,831	\$0									\$4,540,466
	TOTAL AVAILABLE NEXT CY:	\$1,076,060	\$2,181,332	\$1,684,774	\$1,188,216	\$691,658	\$565,902	\$440,146	\$314,390	\$188,634	\$62,878		\$0

### EXHIBIT A 3

#### BURLINGTON INTERNATIONAL AIRPORT CALCULATION OF TOTAL PASSENGER FACILITY CHARGE REVENUE 2012 APPLICATION

CALENDAR YEAR	TOTAL ENPLANED PASSENGERS (1)	ASSUMED PFC - ELIGIBLE ENPLANED PASSENGERS (2)	TOTAL ESTIMATED PFC REVENUE (3)	AIRLINE COLLECTION FEES (4)	NET PFC REVENUE (5)	ESTIMATED INTEREST INCOME (6)	
2016	729,584	669,394	\$3,012,269	\$73,633	\$2,938,636	\$0	
2017	397,697	364,887	\$1,641,987	\$40,137	\$1,601,831	\$5,526	
2018	0	0	\$0	\$0	\$0	\$0	
2019	0	0	\$0	\$0	\$0	\$0	
	1,127,281	1,034,281	\$4,654,256	\$113,770	\$4,540,466	\$5,526	<b>\$4,534,940</b>

(1) Based on actual enplaned passengers for 2011, increased 2.4% thereafter

(2) Based on 91.75% of Total Enplaned Passengers

(3) Assumed PFC eligible passengers X \$4.50 / passenger

(4) Assumed PFC eligible passengers X \$0.11 / passenger

(5) Total Estimated PFC Revenue - Airline Collection Fees

(6) ((annual net PFC revenue-annual loan payments) X 0.5%

\* Start January 1, 2016

\*\* End June 3, 2017

Average monthly collection: \$4,540,466 /18 months= \$252,248.11

Interest collection = \$5,526 This represents less than a month of collection, therefore the collection period will be not be reduced.

**Anticipated Expiration Date is therefore June 1, 2017**

## **EXCLUDED CARRIERS**

## Burlington International Airport Passenger Facility Charge Program

### Carriers Excluded From Collecting PFCs

**JUSTIFICATION:**

BTV is excluding ATCOs, Part 135 air taxi/commercial operators; and unscheduled Part 121 charter carriers. The annual revenue to BTV from each proposed excluded carrier would be less than \$200.00. These revenues would not cover the cost of the airports recordkeeping requirements and the cost of the annual audit.

For the largest collecting carrier this translates to a compensation of \$7.30 per month to pay for the expense of collecting and remitting the PFCs. This also translates to \$21.92 per quarter to cover the cost of the quarterly report requirements of FAR Part 158.65, if the quarterly reports are not required then there is only \$87.67 available for the required annual report. These dollar figures for compensation do not cover the costs of the monthly remittance and annual report for the carrier.

**EXCLUDED CARRIERS:**

Subsection 11 of FAR Part 158 permits the Burlington International Airport to request that a class of air carriers not be required to collect PFCs. Such a class is one that constitutes less than 1% of the total number of passengers enplaned annually at the airport. The airport intends to request that *On Demand Air Taxi Commercial Operators* (ATCO) be exempt from collecting PFCs. This class of carriers represents less than 1% of total passengers enplaned annually as recorded on FAA Form 1800-31.

Carriers excluded from collecting PFCs at the Burlington International Airport based on FAA Form 1800-31 for calendar year 2011 are:

AIRLINE	ENPLANEMENTS
Blue Bell Air LLC (N22A)	2
Heritage Aviation Inc. (IGXA)	583
Reliant Air Charter, Inc. (QREA)	19
USAirports Air Charters (D79A)	21
ATCO Total:	625
Total enplanements of all carriers	636,018
Percentage of total enplanements for excluded carriers	0.10%