Email with Attachments Sent by Massachusetts Port Authority to NTSB On June 30, 2015 Titled "Follow up Info"

ERA14MA271

Schiada Luke

From: Williams, Sharon [redacted]
Sent: Tuesday, June 30, 2015 10:01 AM
To: Schiada Luke
Cc: Leonhardt, Keith; Costa, Ted
Subject: Follow up Info
Attachments: Hanscom Perimeter Gates-010411.pdf; Hanscom Perimeter Gates_101614.pdf; triennial training summary.docx; ICS205 - MASSPORT - HANSCOM FIELD COMM PLAN.PDF

Hi Luke,

Thank you for your time meeting with us on June 18th. I wanted to follow up on your questions about Massport's proactive measures and enhancement in certain areas, which we agreed were not factors in survivability of the crash, but about which you were interested in receiving more information. We have gathered additional information below.

1. Grid Maps/Gate Maps

Hanscom's grid map, which is part of its Airport Certification Manual (ACM) as required by Part 139, identifies locations and man-made features on and around the airport. Hanscom uses a separate map to show all of the airport gates. Copies of both the grid map and the gate map are provided to the USAF and local towns. In October 2014, Massport clarified all off-airport perimeter gates on the gate map. I have attached a copy of the 2011 gate map (effective at the time of the incident) as well as the updated 2014 gate map.

2. Training for re-supply lines

USAF trains its own fire fighters and, pursuant to its support agreement with Massport, is required to ensure that all of its fire fighters have met Part 139 training requirements. The USAF fire department operates under the "DOD Fire & Emergency Services Program," (DoD document #6055.06, 12/21/06), which references several standards of the National Fire Protection Association and provides a baseline for conducting risk assessments, training, firefighting operations, and water supply.

3. ARFF Training for Mutual Aid Responders

As you know, and as more fully described below, Massport has been in the process of standardizing ARFF services across its three airports (Logan, Hanscom and Worcester) for some time. As part of this process, Massport developed a Deputy Fire Chief Coordinator position in April 2014 to oversee ARFF at Hanscom and Worcester and filled the position in September 2014.

Upon filling the role, Deputy Chief Paul Smith has been working with both USAF and Mutual Aid responders. His work has included the following efforts:

- Quick Response Guides have been compiled by Massport and delivered to Bedford, Concord, Lexington, Lincoln fire departments.
- Two large Hanscom Airport maps delivered to each local fire department for training.
- Aircraft Training and Hangar familiarization programs have been provided, and will continue to be provided, to local fire departments and the USAF fire department.
- Monthly Airfield Response & Communication Drills have been implemented to maintain consistency with airfield familiarization and communications with ATCT.
- Crash charts of different aircraft for training and response delivered to local fire departments.
- Hanscom has been added to Massachusetts Fire District 13 (Metro Fire), expanding fire resources.

- Fuel Farm familiarization power point has been developed and shared with local fire departments; site visits from local fire departments to the fuel farm are scheduled for September 2015.
- A training curriculum, "Adapting and Using Structural Rescue and Firefighting Equipment for Aircraft Rescue and Firefighting," is being developed by Massport Fire Rescue for mutual aid partners. The training curriculum will be implemented on November 1, 2015 and includes rescue techniques, use of hydraulic rescue tools, and water supply.
- An Airport/Community Hazard Analysis and Incident Command Workshop has been developed and is under review by local Fire Chiefs. The workshop will involve local fire, police, and other town officials and will aid in joint preparedness and identifying response management challenges for an aircraft accident on or off the airport.
- A Unified Command organization structure, including Airport Operations, Fire, Police, and EMS commanders, has been established for all incidents to improve joint operations and incident action planning.

In addition, mutual aid responders have participated in twelve (12) Massport-led triennial and table top exercises since 2005. An updated document summarizing those exercises is attached.

4. Radio Interoperability

Although Massport understands that interoperability was not an issue on the night of May 31 as commanders from each responding unit were able to speak directly with one another at a Unified Command post, Massport has nevertheless taken the following steps regarding interoperability:

- Identified a common fire ground frequency ("Metro Fire Ground North") for interoperability for the Hanscom Air Force base fire department and local fire departments;
- A second frequency has also been identified for command if needed (Metro Fire North Repeater);
- Massport led an interoperability table top exercise/workshop in May 2015 in which nearly 40 stakeholders participated;
- Massport has developed an Incident Command System (ICS 205) communications plan (attached). This plan has been approved by local fire chiefs and is currently under review by the EMS providers.

5. Audit of USAF Fire Department Training records

Massport has reviewed USAF training records periodically both before and after the accident, including most recently a comprehensive review in March 2015. As you know, the USAF has also provided annual certifications confirming its compliance with FAA/DoD training regulations. The FAA has certified Hanscom is fully compliant with all Part 139 ARFF requirements at each Part 139 inspection.

As referenced above, the USAF ARFF training certification, and any related Massport review, will no longer be part of Massport's Part 139 compliance after standardization plan changes are implemented at Hanscom in November 2015. As part of Massport's ARFF standardization plan, a 24/7 Massport Fire Rescue Unit will be established at Hanscom. Effective November 2015, Massport Fire Rescue will assume primary ARFF operations, assigning three (3) firefighters and one (1) 3,000 gallon ARFF vehicle to Hanscom to meet its Part 139 ARFF requirements. At that point, USAF will provide secondary ARFF support (including two (2) fire fighters and one (1) 3,000 gallon ARFF vehicle) and will continue to provide primary support for structural fires.

I hope that the information I have provided is useful. Please don't hesitate to let me know if you have any follow-up questions.

Thanks again,
Sharon

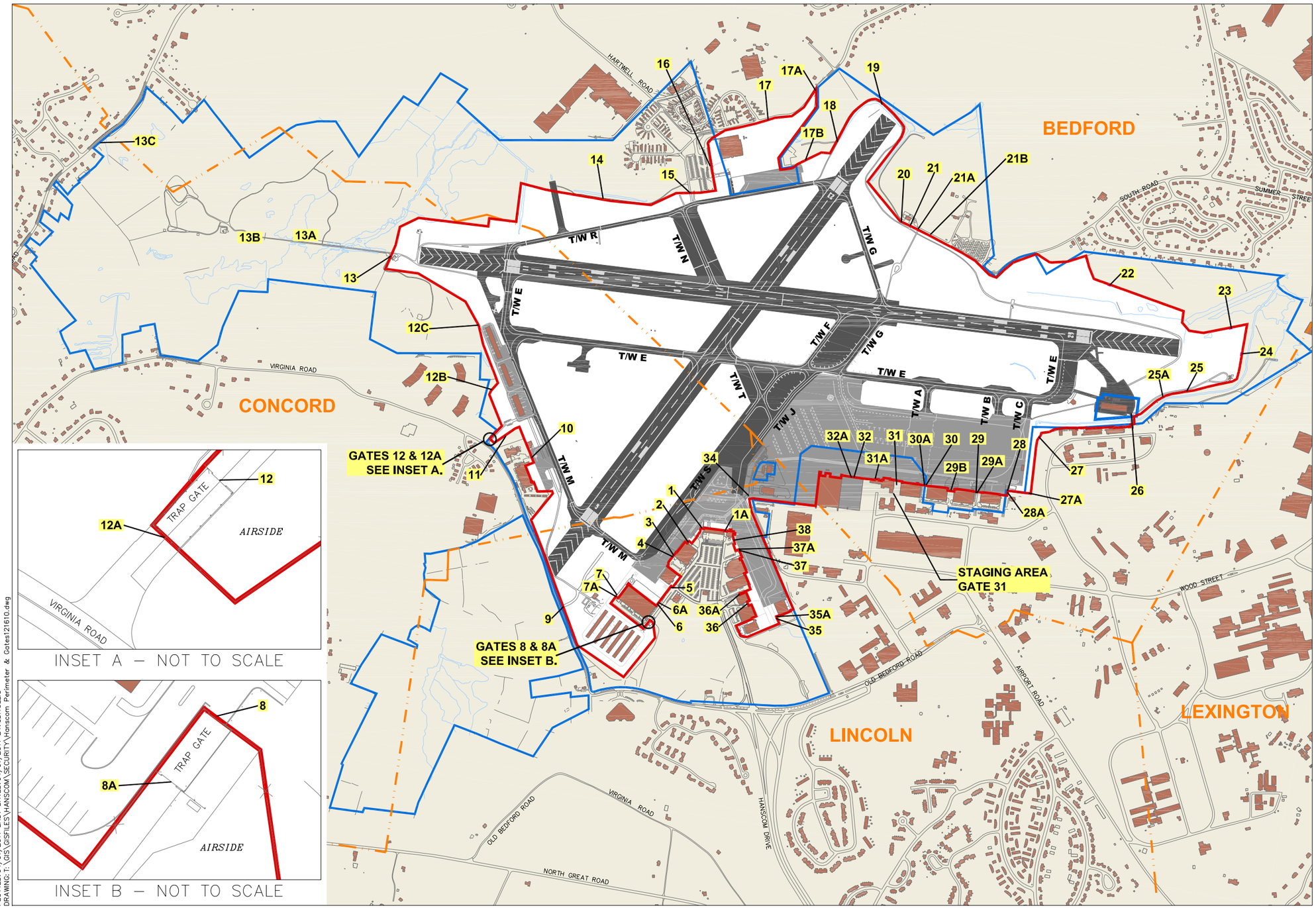
Sharon M. Williams
Massachusetts Port Authority
Director, L. G. Hanscom Field

[redacted]

L.G. Hanscom Field

Perimeter Location and Gate Numbering

Gate Number	Name	Description
1	Civil Air Terminal	Electric slide, west side
1A	Civil Air Terminal	Ped, east side
2	Liberty Mutual	Electric slide, fuel depot area, Liberty Controlled
3	Liberty Mutual	Electric slide, Liberty Controlled
4	Liberty Mutual	Ped, electronic lock, Liberty Controlled
5	Jet Aviation	Double swing, ramp side, Jet Controlled
6	Jet Aviation	Electric slide, ramp side, Jet Controlled
6A	Jet Aviation	Ped, ramp side, Jet Controlled
7	Jet Aviation	Electric double swing, parking lot side, Jet Controlled
7A	Jet Aviation	Ped, parking lot side, electronic, Jet Controlled
8	Old T-Hangars	Electric slide, landside trap gate
8A	Old T-Hangars	Electric slide, airside trap gate
9	Virginia Road	Double swing
10	Draper Labs	Double swing
11	Pine Hill T-Hangars	Double swing, south side
12	Pine Hill T-Hangars	Electric slide, airside trap gate
12A	Pine Hill T-Hangars	Electric slide, landside trap gate
12B	Pine Hill T-Hangars	Double swing, abeam H-Row
12C	Pine Hill Access	Double swing, abeam J-Row
13	Rwy 11 Approach	Double swing
13A	Rwy 11 Approach	Double swing
13B	Rwy 11 Approach	Double swing
13C	Rwy 11 Approach	Double swing
14	Twy R	Single swing
15	Twy R	Manual slide
16	Navy Hangar	Manual slide, Navy controlled
17	Navy Hangar	Double swing, Navy controlled
17A	Navy Hangar	Ped, padlocked, Navy controlled
17B	Rwy 23 Approach	Manual slide
18	Water Treatment Plant	Double swing
19	Rwy 23 Approach	Double swing
20	Water Treatment Plant	Double swing
21	Water Treatment Plant	Double swing
21A	Trailer Park	Double swing
21B	Trailer Park	Double swing
22	Rwy 29	Manual slide
23	Rwy 29	Manual slide
24	Rwy 29	Manual slide
25	Rwy 29	Manual slide
25A	USGS Stream Gauge	Ped, padlocked
26	FAA Alert Hangar	Electric lift (guillotine), FAA controlled
27	Twy C outfall area	Double swing
27A	Fuel Farm area	Ped, padlocked, USAF controlled
28	Signature Flt Support	Electric slide, Signature controlled
28A	Signature Flt Support	Ped, Cipher Lock, Signature controlled
29	Signature Flt Support	Double swing, Signature controlled
29A	Boston MedFlight	Ped, Cipher Lock, Signature controlled
29B	Signature Flt Support	Ped, Cipher Lock, Signature controlled
30	Hanscom Aero Club	Double swing, Hanscom Aero Club controlled
30A	Hanscom Aero Club	Ped, padlocked, Aero Club controlled
31	Fire Station	Electric Slide, USAF Controlled
31A	Fire Station	Ped, padlocked, USAF controlled
32	MIT/LL	Electric slide, east side, MIT Controlled
32A	MIT/LL	Ped, MIT Controlled
34	MPA Field Maint.	Electric slide
35	Hangar 10	Double swing, Signature controlled
35A	Stream Enterprises	Ped, Signature controlled
36	Boston Scientific	Ped, Boston Scientific Controlled
36A	Nagle Aircraft	Ped, Nagle Controlled
37	Signature Flt Support	Electric slide, Signature controlled
37A	Signature Flt Support	Ped, Signature controlled
38	Signature Flt Support	Electric slide, Signature controlled



INSET A – NOT TO SCALE

INSET B – NOT TO SCALE

PLOTTED: 04/01/2011 LAST SAVED: 04/01/2011 BY: GDITULLIO
DRAWING: I:\GIS\GISFILES\HANSCOM\SECURITY\Hanscom Perimeter & Gates121610.dwg

Massachusetts Port Authority
Capital Programs Department
January 2011

Legend

- Apron/Aircraft Parking
- Runway / Taxiway
- Existing Building
- Approx. Property Line
- Perimeter Line
- Town Line
- Drainage Way

N

0 1200 2400

in feet

Notes:
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L.G. Hanscom Field

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Gate Number	Name	Description
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4	Liberty Mutual	Ped, electronic lock, Liberty Controlled
5	Jet Aviation	Double swing, ramp side, Jet Controlled
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8A	Old T-Hangars	Electric slide, airside trap gate
9	Virginia Road	Double swing
10	Rectrix Aviation	Electric slide, south side
11	Rectrix Aviation	Electric slide, north side
11A	Draper Labs	Double swing
11B	Pine Hill T-Hangars	Double swing, south side
12	Pine Hill T-Hangars	Electric slide, airside trap gate
12A	Pine Hill T-Hangars	Electric slide, landside trap gate
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12C	Pine Hill Access	Double swing, abeam J-Row
13	Rwy 11 Approach	Double swing
14	Twy R	Single swing
15	Twy R	Manual slide
16	Navy Hangar	Manual slide, Navy controlled
17	Navy Hangar	Double swing, Navy controlled
17A	Navy Hangar	Ped, padlocked, Navy controlled
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26	FAA Alert Hangar	Electric lift (guillotine), FAA controlled
26A	Shawsheen Outfall	Ped, padlocked
26B	Shawsheen Outfall	Double swing
26C	Shawsheen Outfall	Double swing
27	Shawsheen Outfall	Double swing
27A	Twy C outfall area	Double swing
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35A	Stream Enterprises	Ped, Signature controlled
36	Boston Scientific	Ped, Boston Scientific Controlled
36A	Nagle Aircraft	Ped, Nagle Controlled
37	Signature Flt Support	Electric slide, Signature controlled
37A	Signature Flt Support	Ped, Signature controlled
38	Signature Flt Support	Electric slide, Signature controlled
Rwy5AG1	Rwy 5 Approach Ballpark	Double swing
Rwy11AG1	Rwy 11 Approach	Double swing
Rwy11AG2	Rwy 11 Approach	Double swing
Rwy11AG3	Rwy 11 Approach	Manual slide
Rwy29AG1	Rwy 29 Approach	Double swing (Base Access)
Rwy29AG2	Rwy 29 Approach	Double swing (Base Access)

INSET A – NOT TO SCALE

INSET B – NOT TO SCALE

PLOTTED:16/10/2014 LAST SAVED:16/10/2014 BY:CDITULLIO
DRAWING:T:\GIS\GISFILES\HANSCOM\SECURITY\Hanscom Perimeter & Gates_101414.dwg

Massachusetts Port Authority
Capital Programs Department
October 2014

Legend

- Apron/Aircraft Parking
- Runway / Taxiway
- Existing Building
- Approx. Property Line
- Perimeter Line
- Town Line
- Drainage Way

N

0 1200 2400

in feet

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Triennial and Table Top exercises 2000 – 2015

2000,

Type: Table Top
Aircraft Type: Minuteman Dash 8- 300
Scenario: 45 Souls and 800 gallons of fuel on Board. Aircraft departs RWY 29 with no incident. 2 miles to the west, the Pilot reports experiencing trouble with the #1 engine, immediately returns to the airport and attempts to land on RWY 5. The aircraft crashes into a ball field approximately ½ mile off the end of RWY 5.

2001, August 15th

Type: Table Top
Aircraft Type: Shuttle America Dash 8-300
Scenario: 33 Souls on Board. Tower clears aircraft to land on RWY 11. One minute later tower observes smoke off the approach end of RWY 11 with no sight of the aircraft. Crash phone is pulled.

2002, July 17th

Type: Table Top and Full Scale
Aircraft Type: 2 saberliners
Scenario: Collision of 2 saberliner jets. One jet is landing on RWY 5 and the other jet has failed to hold short of RWY 5 on TWY M.

2003, September 5th

Type: Table Top
Aircraft Type: Boeing 737-200
Scenario: 50 Souls on Board (North Carolina College Football Team). Aircraft is taking off RWY 29 and experiences a nose wheel blow out causing rubber deposits to ingest into engine #2. Aircraft makes contact with the RWY 11 glideslope antenna causing the aircraft to catch fire.
Fire Department Participants: Lincoln, Concord, Bedford (Lexington involved in the planning)

2004, August 31st

Type: Table Top
Aircraft Type: British Aerospace Jet Stream 31
Scenario: At least 19 Souls on Board. Aircraft departs RWY 29 and experiences an engine #1 failure. The aircraft attempts to land on RWY 5 but crashes into hangar 24.

2005, June 27th

Type: Triennial
Aircraft Type: Boeing 727

Scenario: 46 Souls on Board. Pilot loses directional control on short final to Runway 11. The aircraft impacts the ground south of RWY 11 and crashes into building 1840.
Fire Department Participants: Lincoln, Concord, Bedford, Lexington

2006, July 12th

Type: Table top
Aircraft Type: Cessna Caravan
Scenario: 6 Souls on Board. Aircraft crashes approximately ½ mile off the end of RWY 11 into the wetlands due to an engine failure.
Fire Department Participants: Lincoln, Concord, Bedford, Lexington

2007, July 13th

Type: Table top
Aircraft Type: Boeing 737-800
Scenario: At least 25 Souls on Board. Aircraft departs Runway 29 and experiences an engine failure. The aircraft crashes approximately ½ mile west of Runway 29.
Fire Department Participants: Lincoln, Lexington, Bedford (Concord involved in the planning)

2008, June 4th

Type: Triennial
Aircraft Type: Global Express Corporate Jet
Scenario: 21 Souls on Board. Aircraft crashes 2000 feet short of Runway 11 threshold.
Fire Department Participants: Lincoln, Lexington, Bedford (Concord involved in the planning)

2009, June 12th

Type: Table Top
Aircraft Type: Embraer 145
Scenario: At least 30 Souls on Board. Aircraft experiences left main landing gear collapse during touchdown on Runway 29. Aircraft slides off the runway at approximately 3500 feet with significant damage and smoke.
Fire Department Participants: Bedford, Concord (Lincoln, Lexington involved in the planning)

2010, June 22nd

Type: Table Top
Aircraft Type: Gulfstream V, fuel truck
Scenario: 10 Souls on Board on gulfstream; 1 fuel truck driver; Signature 3,000 gallon fuel truck crashes into a gulfstream taxiing out of the Signature ramp. The collision causes an explosion and part of the Signature terminal to catch on fire.
Fire Department Participants: Lexington, Lincoln, Concord, Bedford

2011, June 7th

Type: Triennial and Table Top
Aircraft Type: Boeing 737 and Aztec.
Scenario: 44 Souls on Board the Boeing 737; 5 Souls on Board the Aztec. Boeing 737 pilot fails to hold short of RWY 5 and a landing Aztec collides with the Boeing 737 on the approach end of Runway 5.
Fire Department Participants: Lexington, Lincoln, Bedford, Concord, Waltham

2012, June 22nd

Type: Table Top
Aircraft Type: Embraer 120
Scenario: #1: Forest fire in the Runway 11 approach wooded area. #2: Aircraft crashes just short of Runway 29 approach into the culvert. No fire; aircraft has flipped over and shows significant damage.
Fire Department Participants: Lincoln, Lexington, Concord (Bedford involved in the planning)

2013, June 21st

Type: Table Top
Aircraft Type: Boeing 767 and Falcon 20
Scenario: 2 Souls on Board the Falcon 20; 102 Souls on Board the 767. MIT DOD Falcon 20 experiences smoke in the cockpit on the Taxiway E blast pad. During the first incident, a Boeing 767 experiences a left main landing gear collapse while landing on Runway 29 and slides off the runway.
Fire Department Participants: Lexington, Lincoln, Concord, Bedford

2014, April 11th

Type: Table Top
Aircraft Type: Boeing 737
Scenario: Unified Command workshop
Fire Department Participants: Bedford, Lexington

2014, May 20th

Type: Triennial
Aircraft Type: Boeing 737
Scenario: 48 Souls on Board (Boston College Hockey Team). Aircraft landed Runway 23 experiencing a left main gear collapse. Aircraft rests on the approach end of Runway 5 with the left engine on fire.
Fire Department Participants: Lexington, Concord, Lincoln, Bedford, Waltham, Arlington.

2015, May 4th

Type: Table Top Exercise & Communications Interoperability Workshop
Aircraft Type: Global Express
Scenario: A Bombardier Global Express (BD-700) reports an engine failure approximately 5 miles (2 ½ minutes) out for Runway 5. The aircraft crashes approximately 900 feet short of Runway 5 directly on the perimeter fence. The left engine is on fire with black smoke in the air. There is also a fuel odor that is

detected in the air. Passengers have opened the main cabin door and there are 5 victims walking around on the runway surface. The co-pilot was killed on impact. A mini school bus has overturned onto its side and is blocking both lanes on Virginia Road. The driver has been ejected; at this time the driver is missing. The passengers in the back of the bus are injured and entrapped.

Participants met in Functional Group Breakout Sessions with their respective agency partners. After the Functional Groups sessions, a hot wash and debrief was conducted for suggestions to creating a common communications plan. Development of an ICS 205 communications plan is progress.

Fire Department Participants: Lexington, Concord, Lincoln, Bedford.

INCIDENT RADIO COMMUNICATIONS PLAN	Incident Name	Date/Time Prepared	Operational Period Date/Time
	MASSPORT - HANSCOM FIELD	16-Jun-15	AS NEEDED

NET	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/NAC	TX Freq N or W	Tx Tone/NAC	Mode A, D or M	Remarks
1	COMMAND	LPS 1	ALL						
2P	LAW COORD	AREAWIDE 3	LAW						
		AREAWIDE 3	LAW						
3	LAW (AS NEEDED)	MSP SOPS *(TBD)*	MSP						
4	LAW (AS NEEDED)	NORTHWEST DIST	LAW						
5	LAW (AS NEEDED)	NORTHWEST TAC	LAW						
6	FIREGROUND	FIREGROUND NORTH	FIRE/RESCUE						
7	FIRE (AS NEEDED)	NORTH DISTRICT	FIRE/RESCUE						
8	FIRE (AS NEEDED)	UTAC42D	FIRE/RESCUE						
9	EMS COORD	SOP MED 92D	EMS						
10	EMS HAILING	BOS MED 4N	EMS						
11	EMS (AS NEEDED)	BOS MED *(TBD)*	EMS						
12	EMS (AS NEEDED)	UTAC43D	EMS						
13	MPA OPS	HANSCOM 1	MPA OPS						
14	MPA (AS NEEDED)	HANSCOM 2	MPA						
15	GROUND TAC	121.7	GROUND						
16	AIR to GROUND	118.5	TOWER						
2P	Active/Full Time Patch								

Prepared By (Communications Unit)

MPA

County State Latitude N Longitude W

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25) or "M" indicating mixed mode. All channels are shown as if programmed in a control station, mobile or portable radio. Repeater and base stations must be programmed with the Rx and Tx reversed.