

**NATIONAL TRANSPORTATION SAFETY BOARD  
Office of Research and Engineering  
Vehicle Recorder Division  
Washington, D.C. 20594**



**GROUP CHAIRMAN'S FACTUAL REPORT OF INVESTIGATION**

**DCA17IA020**

**By  
Bill Tuccio, Ph.D.**

**WARNING**

The reader of this report is cautioned that the transcript of a cockpit voice recorder audio recording is not a precise science but is the best product possible from a Safety Board group investigative effort. The transcript or parts thereof, if taken out of context, could be misleading. The transcript should be viewed as an accident investigation tool to be used in conjunction with other evidence gathered during the investigation. Conclusions or interpretations should not be made using the transcript as the sole source of information.

**NATIONAL TRANSPORTATION SAFETY BOARD**  
Vehicle Recorder Division

April 28, 2017

## **Cockpit Voice Recorder**

**Group Chairman's Factual Report**  
**By Bill Tuccio, Ph.D.**

### **1. EVENT SUMMARY**

Location: LaGuardia, New York  
Date: October 27, 2016  
Aircraft: 737-700, Registration N278EA  
Operator: Eastern Air Lines Group, Inc., Flight 3452  
NTSB Number: DCA17IA020

On October 27, 2016, about 1942 eastern daylight time (EDT), Eastern Air Lines flight 3452, a Boeing 737-700, registration N278EA overran runway 22 during landing roll at New York's La Guardia Airport (LGA). The chartered passenger flight, operated under the provisions of Title 14 *Code of Federal Regulations* (CFR) Part 121, originated from Fort Dodge Regional Airport (FOD), Fort Dodge, Iowa. The flight departed about 1623 central daylight time. The 9 crew and 39 passengers evacuated the aircraft via airstairs. Night instrument meteorological conditions prevailed at the time of the incident and an instrument flight plan had been filed. A solid-state cockpit voice recorder (CVR) was sent to the National Transportation Safety Board (NTSB) Vehicle Recorder Division for evaluation. The CVR group meeting convened on January 3, 2017, and a partial transcript was prepared for the 2-hour, 4-minute digital recording (see attached).

### **2. GROUP**

Chairman: Dr. Bill Tuccio  
Aerospace Engineer  
NTSB

Member: Bob Hendrickson  
Senior Air Safety Investigator  
Federal Aviation Administration

Member: Captain Sam Goodwill  
Lead Safety Pilot  
The Boeing Company

Member: John Furneaux  
Vice President – Flight Operations  
Eastern Air Lines Group, Inc.

### 3. DETAILS OF INVESTIGATION

The NTSB Vehicle Recorder Division received the following CVR:

Recorder Manufacturer/Model: **Honeywell 6022**  
Recorder Serial Number: **3452**

#### 3.1 CVR Carriage Requirements

Per federal regulation, turbine engine powered aircraft operating under 14 CFR Part 121 must be equipped with a CVR that records a minimum of the last 2 hours of aircraft operation; this is accomplished by recording over the oldest audio data. When the CVR is deactivated or removed from the airplane, it retains only the most recent 2 hours of CVR operation.

#### 3.2 Recorder Description

This model CVR, the Honeywell 6022, is a solid state CVR that records 120 minutes of digital audio. Specifically, it contains a 2-channel recording of the last 120 minutes of operation and separately contains 4-channel recording of the last 30 minutes of operation. The 120-minute portion of the recording is comprised of one channel that combines three audio panels sources and a second channel that contains the cockpit area microphone (CAM) source. The 30-minute portion of the recording contains 3 channels of audio information: one channel for each flight crew and one channel for a cockpit observer.

#### 3.3 Recorder Damage

Upon arrival at the laboratory, it was evident that the CVR had not sustained any heat or structural damage and the audio information was extracted from the recorder normally, without difficulty.

#### 3.4 Audio Recording Description

Each channel's audio quality is indicated in Table 1.<sup>1</sup>

**Table 1.** Audio quality.

Channel Number	Content/Source	Quality	Duration
MP	Mixed Audio	Excellent	120 min
CAM	CAM	Excellent	120 min
1	Observer	Excellent	30 min
2	First Officer	Excellent	30 min
3	Captain	Excellent	30 min

#### 3.5 Timing and Correlation

Timing on the transcript was established by correlating the CVR events to common events on the FDR. Specifically, four radio transmissions that the aircraft made recorded on the CVR at 1160.3, 1194.0, 1213.5, and 1225.3 seconds CVR Elapsed Time (time since the start of the recording) were correlated to the radio transmit microphone key parameter for the same transmissions recorded on the FDR at 70641.1, 70675.1, 70694.1, and 70706.1

<sup>1</sup> See attached CVR Quality Rating Scale.

EDT (seconds past midnight). Each of the four radio transmissions acted as an anchor point for a linear interpolation, resulting in the following relationship:

$$\text{CVR EDT} = \text{CVR Elapsed Time} + 69480.5 \text{ seconds past midnight}$$

### **3.6 Description of Audio Events**

The recording began at 17:47 EDT, when the aircraft, operating as Eastern Airlines flight 3452, was enroute at FL390. Talk was consistent with the captain acting as pilot monitoring, and the first officer acting as pilot flying. Conversation was consistent with normal enroute duties including: frequency changes, time and fuel usage, monitoring of altitude and route, and managing turbulence at cruise altitude. Additionally, there were short conversational exchanges not pertinent to this particular flight.

Between 18:48:06 EDT and 19:02:52 EDT, the crew received the Automated Terminal Information Service (ATIS) information for LGA and then briefed the approach and landing at LaGuardia. This time period was transcribed and is attached to this report (Part One).

Between 19:02:52 EDT and 19:18:01 EDT, the flight descended to 9,000 feet. During the descent, the crew discussed anti-ice usage, enroute rain showers (some heavy), and flight management system (FMS) programming. The crew performed the approach checklist, the captain attempted (unsuccessfully) to contact the LGA fixed based operator, and made an arrival passenger announcement.

The period after 19:18:01 EDT until the end of the recording at 19:48:32 EDT was transcribed and is attached to this report (Part Two). During the time the aircraft was in the air with New York Approach and LaGuardia Tower, there were nearly continuous radio traffic with other aircraft landing at LaGuardia.

As part of the NTSB accident investigation process, the flight crew was invited to review the CVR transcript and suggest corrections or additions. The first officer declined the invitation. On January 26, 2017, the captain reviewed the transcript and had one factual comment: at 19:40:43.3 EDT, the text should read, "and put her down."

## Attachment I

### CVR Quality Rating Scale

The levels of recording quality are characterized by the following traits of the cockpit voice recorder information:

<b>Excellent Quality</b>	Virtually all of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate only one or two words that were not intelligible. Any loss in the transcript is usually attributed to simultaneous cockpit/radio transmissions that obscure each other.
<b>Good Quality</b>	Most of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate several words or phrases that were not intelligible. Any loss in the transcript can be attributed to minor technical deficiencies or momentary dropouts in the recording system or to a large number of simultaneous cockpit/radio transmissions that obscure each other.
<b>Fair Quality</b>	The majority of the crew conversations were intelligible. The transcript that was developed may indicate passages where conversations were unintelligible or fragmented. This type of recording is usually caused by cockpit noise that obscures portions of the voice signals or by a minor electrical or mechanical failure of the CVR system that distorts or obscures the audio information.
<b>Poor Quality</b>	Extraordinary means had to be used to make some of the crew conversations intelligible. The transcript that was developed may indicate fragmented phrases and conversations and may indicate extensive passages where conversations were missing or unintelligible. This type of recording is usually caused by a combination of a high cockpit noise level with a low voice signal (poor signal-to-noise ratio) or by a mechanical or electrical failure of the CVR system that severely distorts or obscures the audio information.
<b>Unusable</b>	Crew conversations may be discerned, but neither ordinary nor extraordinary means made it possible to develop a meaningful transcript of the conversations. This type of recording is usually caused by an almost total mechanical or electrical failure of the CVR system.

**Transcript of a Honeywell 6022 solid-state cockpit voice recorder, serial number 3452, installed on an Eastern Air Lines Group, Inc. 737-7L9 (N278EA), which overran the runway at LaGuardia Airport in LaGuardia, New York.**

## **LEGEND**

<b>CAM</b>	Cockpit area microphone voice or sound source
<b>HOT</b>	Flight crew audio panel voice or sound source
<b>INT</b>	Flight crew intercom voice or sound source
<b>RDO</b>	Radio transmissions from N278EA
<b>CTR-CLE</b>	Radio transmission from Cleveland center controller
<b>CTR-NYC</b>	Radio transmission from New York center controller
<b>APR-NYC</b>	Radio transmission from first New York approach controller
<b>APR-FINAL</b>	Radio transmission from second New York approach controller
<b>TWR</b>	Radio transmission from the LaGuardia airport tower controller
<b>MISC-AC</b>	Radio transmission from a miscellaneous aircraft
<b>PORT</b>	Radio transmission from New York Port Authority
<b>FIRSTRES</b>	Radio transmission from first responders
<b>PA</b>	Passenger address system
<b>ATIS-LGA</b>	Automatic Terminal Information Service from LaGuardia
<b>AWM</b>	Aural Warning Module
<b>EGPWS</b>	Enhanced Ground Proximity Warning System
<b>-1</b>	Voice identified as the captain
<b>-2</b>	Voice identified as the first officer
<b>-3</b>	Voice identified as a flight attendant
<b>-4</b>	Voice identified as secret service agent
<b>-5</b>	Voice identified as a passenger
<b>-?</b>	Voice unidentified
<b>*</b>	Unintelligible word
<b>#</b>	Expletive
<b>@</b>	Non-pertinent word
<b>( )</b>	Questionable insertion
<b>[ ]</b>	Editorial insertion

Note 1: Times are expressed in eastern daylight time (EDT).

Note 2: Generally, only radio transmissions to and from the event aircraft were transcribed.

Note 3: Words shown with excess vowels, letters, or drawn out syllables are a phonetic representation of the words as spoken.

Note 4: A non-pertinent word, where noted, refers to a word not directly related to the operation, control or condition of the aircraft.

Note 5: "-3" refers to one or more of the flight attendants.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

17:47 EDT

**START OF RECORDING**

18:48:06 EDT

**START OF PART ONE OF TRANSCRIPT**

18:48:06.7

**HOT-1** after twenty three hundred. one sixty at thirteen. gusting to twenty. one mile rain. mist. broken seven hundred. overcast twelve hundred.

18:48:18.4

**CAM-2** think they're using the one three's?

18:48:20.6

**HOT-1** sounds like a one three operation to me.

18:48:22.5

**CAM-2** i-l-s one three please. autobrakes three. flaps thirty.

18:48:26.8

**HOT-1** (you have to go) flaps forty don't ch'ya?

18:48:28.8

**CAM-2** na-ahh.

18:48:29.3

**HOT-1** seven thousand feet.

18:48:30.4

**CAM-2** we don't need it. autobrakes three will do it.

18:48:34.0

**HOT-1** alright.

18:48:49.2

**CAM-2** when you landed back there...you still had a lottttt of runway after we stopped.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:48:53.9

**CAM-1** I know.

18:48:54.7

**CAM-2** yeah (sir).

18:49:01.6

**HOT-1** alright.

18:49:02.8

**HOT-1** (you got) thirty one twenty seven I subtracted your one point one.

18:49:07.3

**HOT-1** (and with) that. and we go over here departure arrivals. LaGuardia arrival. got the Milton Four.

18:49:17.0

**HOT-1** i-l-s one three. there is no transition.

18:49:22.9

**HOT-1** give you an execute.

18:49:23.7

**CAM-2** nice.

18:49:26.3

**HOT-1** back to legs.

18:49:32.1

**HOT-1** see what it changes if anything.

18:49:35.8

**HOT-1** BEUTY at ten. DREMS. APPLE. PROUD. then radar vectors to the final.

18:50:02.3

**CAM-2** I'm gonna make... \*\*...(ping)...make it twenty eight.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**



**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:50:09.0

**HOT-1** you got it.

18:50:14.3

**CAM-1** nope.

18:50:15.1

**CAM-2** oh yeah yeah yeah.

18:50:25.8

**CAM-2** KEATING right three three zero here.

18:50:28.3

**HOT-1** yeap.

18:50:29.7

**CAM-2** three three zero here.

18:50:33.4

**CAM-1** okay.

18:50:35.5

**CAM-2** execute.

18:50:37.3

**CAM-2** and ah we're in v-nav.

18:50:39.3

**CAM-1** okay.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

18:50:15.4

**CTR-CLE**

Eastern thirty four fifty two cross KEATING echo tango golf at and maintain flight level three three zero.

18:50:21.7

**RDO-1**

KEATING at three three zero. Eastern ah thirty ah four fifty two.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:50:41.2  
**CAM-2** and cruise page. three three zero.

18:50:43.4  
**HOT-1** allll right.

18:50:46.2  
**HOT-1** start down now?

18:50:52.3  
**CAM-2** execute. awesome.

18:50:54.1  
**HOT-1** alright.

18:50:58.7  
**CAM-1** (okay).

18:50:59.5  
**CAM-2** awesome.

18:51:23.3  
**CAM-2** okay @. ready?

18:51:24.7  
**HOT-1** forty nine two point zero.

18:51:28.0  
**HOT-1** am I ready for what?

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

18:51:11.4  
**RDO-1** Eastern thirty three f- ah fifty two. thirty four fifty two. is leaving three nine zero for three three zero.

18:51:17.1  
**CTR-CLE** Eastern thirty four fifty two roger. thank you.

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:51:29.7

**CAM-2** I don't know. \* no-no. yeah I guess she interrupted us. for ah. I thought you were done with this thing.

18:52:27.8

**CAM-1** guess what.

18:52:27.9

**CAM-2** what did he say about one three?

18:52:30.0

**CAM-1** departing one three. they're landing two two.

18:52:35.4

**CAM-2** okay two two.

18:52:37.7

**CAM-1** i-l-s two two. \*\*.

18:52:40.4

**CAM-2** i-l-s two two.

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

18:51:48.4

**ATIS-LGA**

LaGuardia airport ATIS information Bravo. two two two six zulu special. wind one three zero at niner. visibility three. rain. ceiling one thousand five hundred broken. two thousand two hundred overcast. temperature one four. dewpoint one one. altimeter three zero one four. i-l-s runway two two approach in use. land runway two two. depart runway one three. braking action advisories are in effect. c-p-d-l-c available. LaGuardia Class Bravo services available on frequency-

18:52:31.4

**ATIS-LGA**

-\* Zulu Alpha between taxiway Kilo and Mike is now taxiway Alpha.

18:52:37.0

**ATIS-LGA**

taxiway Lima \*\*.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:52:48.5

**CAM-2** i-l-s two two (boss).

18:52:49.8

**HOT-1** yeap.

18:52:53.5

**HOT-1** oh well. # happens. life's a #. we chose incorrectly. i-l-s two two.  
ya' like that.

18:53:02.9

**CAM-2** ah yes. no transitions.

18:53:03.9

**HOT-1** alright execute.

18:53:05.8

**HOT-1** no transitions.

18:53:08.1

**CAM-2** okay. now we have YOMAN GREKO.

18:53:14.5

**CAM-2** YOMAN and GREKO.

18:53:15.9

**HOT-1** you want me to make those hard altitudes?

18:53:17.6

**CAM-2** YOMAN. only YOMAN.

18:53:23.7

**CAM-2** okay thank you.

18:53:24.8

**CAM-1** alright. (three thousand) (max).

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:53:31.8

**HOT-1** two twelve for the mins.

18:53:33.1

**CAM-2** \* easier taxi for us anyway.

18:53:48.9

**HOT-1** yeah right turn off right into it.

18:53:50.9

**CAM-2** yeah.

18:53:55.4

**HOT-1** alright. missed approach. twenty seven hundred feet altitude.  
PROUD intersection. and hold.

18:54:25.7

**CAM-2** not gusting anymore.

18:54:37.6

**HOT-1** so hold at PROUD on the missed.

18:54:47.6

**HOT-1** and two two with a right turn off. perfect.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

18:54:01.8

**ATIS-LGA**

for numerous birds in the vicinity of LaGuardia airport. advise on  
initial contact you have information Bravo.

18:54:17.9

**ATIS-LGA**

\* information Charlie \*\*\* wind one two zero at niner. visibility  
three.

18:55:11.2

**ATIS-LGA**

-service. runway status light system out of service. use caution  
for numerous birds in the vicinity of LaGuardia Airport. advise  
on initial contact you have information Charlie.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:55:21.7

**CAM-2** is this thing gonna make three. e-t-g at three three zero.

18:55:26.4

**CAM-1** yeah I guess.

18:55:29.3

**CAM-2** no it's not.

18:55:32.2

**CAM-2** not gonna make it.

18:55:32.9

**CAM-1** well then \*\* level change.

18:55:43.0

**CAM-2** why is not making it. #.

18:55:58.4

**CAM** [sound of c-chord, similar to altitude alert]

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

18:55:29.8

**ATIS-LGA**

LaGuardia Airport ATIS information Charlie. two two five one zulu. wind one two zero at niner. visibility three. rain. ceiling niner hundred broken. one thousand five hundred overcast. temperature one three. dewpoint one one. altimeter three zero one four. i-l-s runway two two approach in use. land runway two two. depart runway one three...

18:55:58.4

**ATIS-LGA**

...braking action advisories in effect. c-p-d-l-c available. LaGuardia Class Bravo services available on frequency one two six point zero five. taxi (lane) Zulu-Alpha between Kilo and Mike is now taxiway Alpha. taxiway Lima is closed between taxiways Alpha and Bravo. runway two two centerline lights out of service. runway status light system out of service. use caution  
\*\*\*

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:56:00.1  
**CAM-1** thirty four. thirty three.

18:56:04.9  
**CAM-2** okay I guess we made it. with four hundred feet. huh.

18:56:11.9  
**CAM-2** friggin' thing.

18:56:47.4  
**CAM-2** back to v-nav.

18:56:49.1  
**CAM-1** levelling.

18:56:59.5  
**CAM-1** two six five four.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

18:56:28.8  
**CTR-CLE** Eastern thirty four fifty two contact New York Center one two eight point five seven. goodday.

18:56:33.3  
**RDO-1** twenty eight fifty seven. Eastern thirty four fifty two.

18:56:36.4  
**ATIS-LGA** -information Charlie.

18:56:42.3  
**ATIS-LGA** LaGuardia Airport \*\*\*.

18:56:51.4  
**CTR-NYC** Eastern thirty four fifty two. squawk two six five four.

18:56:55.1  
**RDO-1** two six five four. Eastern thirty six [sic] fifty two.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:57:01.4

**CAM-2** nope. you put. two six five four. yeah. I'm sorry. my bad. I was thinking two six forty five.

18:57:13.2

**HOT-1** yeah he called just as I was getting ready to do the check-in. so it worked out.

18:57:25.3

**HOT-1** alright \* the ATIS just changed so you got the radio for a minute. I'll get it.

18:57:30.2

**HOT-2** okay.

18:57:31.2

**CAM-1** you have one.

18:57:32.6

**CAM-2** I have one.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

18:57:34.0

**ATIS-LGA**

-runway two two centerline lights out of service. runway status light system out of service. use caution for numerous birds in the vicinity of LaGuardia Airport. advise on initial contact you have information Charlie.

18:57:54.7

**ATIS-LGA**

LaGuardia Airport ATIS information Charlie. two two five one zulu. wind one two zero at niner. visibility three. rain. ceiling niner hundred broken. one thousand five hundred overcast. temperature one three. dewpoint one one. altimeter three zero one four. i-l-s runway two two approach in use. land runway two two. depart runway one three. braking action advisories in effect. c-p-d-l-c available. LaGuardia Class Bravo services available on frequency one two six point zero five. [ATIS Charlie continues]



**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:58:29.8  
**CAM-2** MARRC.

18:58:31.3  
**CAM-1** okay.

18:58:31.8  
**CAM-2** MARRC at one eight oh.

18:58:32.9  
**CAM-1** execute. you did that.

18:58:35.1  
**CAM-2** one eight oh. one eight oh. v-nav.

18:58:37.2  
**CAM-1** v-nav.

18:58:37.9  
**CAM-2** I hope it does it this time.

18:58:40.2  
**CAM-1** leave it in v-nav path and let it go down on its own.

18:58:43.7  
**CAM-2** yeah.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

18:58:16.9  
**CTR-NYC**

Eastern thirty four fifty two cleared direct MARRC cross MARRC at flight level one eight zero.

18:58:21.7  
**RDO-2**

direct to MARCC (cross) MARCC one eight zero. Eastern thirty four fifty two.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:59:05.4

**HOT-1** okay information Charlie at twenty two fifty one. one twenty at nine. three miles in rain. nine hundred broken. fifteen hundred overcast. thirteen degrees. three zero one four on the altimeter. i-l-s runway two two. centerline lights. and status lights are out of service.

18:59:23.1

**CAM-2** what is the temperature?

18:59:24.8

**HOT-1** thirteen.

18:59:25.4

**CAM-2** okay.

18:59:27.9

**CAM-2** I guess we don't need anti-ice on the way down.

18:59:32.0

**CAM-1** on the way down maybe I don't \*\*-

18:59:33.4

**CAM-2** maybe. we'll see.

18:59:35.6

**CAM-1** it's one of those you know. play it by ear.

18:59:41.6

**HOT-1** alright.

18:59:41.8

**CAM-2** okay uhm. you're back?

18:59:45.6

**HOT-1** I'm back.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

18:59:46.6

**CAM-2** okay. @. I'm gonna give you flight controls okay. let's brief this thing since the weather's not that good over there.

18:59:51.9

**HOT-1** roger that.

18:59:53.0

**CAM-2** so we already ah check the arrival the altitudes and everything. so we know that it's done we did it before. so i-l-s [sound of chime, similar to cabin call] two two.

19:00:02.6

**CAM-?** ahh oohh.

19:00:04.0

**HOT-1** alright. I'm off.

19:00:05.2

**CAM-2** alright.

19:00:06.1

**INT-1** yes.

19:00:06.9

**INT-3** hello. how far off we. or how-how much time do we have left. and how are you doin' up there?

19:00:13.2

**INT-1** ah we're doin' okay. uhm. we're right now showing about thirty minutes to go. and they could put us into holding or something as we get closer. so right now we're lookin' to land about thirty five past the hour.

19:00:24.1

**INT-3** thirty five past the hour. gotchy'a. uhm do you guys need anything up there?

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:00:28.4

**INT-1** no right now we're good.

19:00:29.7

**INT-3** okay \*\*.

19:00:30.3

**INT-1** \*\*.

19:00:32.4

**INT-3** \*\*.

19:00:36.7

**CAM-2** one ten five. is the localizer frequency. one ten five.

19:00:39.6

**CAM-1** yeap. yeap.

19:00:41.2

**CAM-2** one ten five. final approach course two two four. two two four.  
two two four.

19:00:47.4

**HOT-1** alright. two two four.

19:00:48.2

**CAM-2** okay we'll cross GREKO nineteen hundred. and the minimums  
are two twelve.

19:00:52.7

**HOT-1** set left.

19:00:53.3

**CAM-2** on both sides.

19:00:55.1

**CAM-2** uh touch down zone is twelve feet. the papi is on the right side of  
the runway.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:01:00.0

**CAM-2** and visibility is better than the one prescribed for the approach.

19:01:03.5

**CAM-2** because we need a half mile and we have three.

19:01:06.9

**HOT-1** yeap.

19:01:07.6

**CAM-2** so that's good. taxi. as we said before. we're going to clear to the right. whenever we get off. and go to the ramp. you know where it is? you said here right.

19:01:17.4

**CAM-1** should be Foxtrot Delta.

19:01:20.1

**CAM-2** Fox Delta yeah.

19:01:20.3

**CAM-1** \*\* very back.

19:01:23.5

**HOT-1** helicopter pad is what-what they did before.

19:01:27.9

**CAM-2** I think it's Alpha Alpha.

19:01:30.4

**HOT-1** no.

19:01:31.0

**CAM-2** Alpha Alpha Delta.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:01:32.3

**HOT-1** yeah you're right Alpha Alpha Fox. and then the-the left turn. on.  
on the helicopter pad. facing you know. facing back towards  
Delta.

19:01:42.3

**CAM-2** okay.

19:01:43.7

**CAM-2** autobrakes three. flaps ah thirty. questions.

19:01:47.5

**HOT-1** no questions.

19:01:48.2

**CAM-2** alright.

19:01:48.6

**HOT-1** live long and prosper ha ha ha.

19:01:49.9

**CAM-2** cool. I have the controls. and let's do it.

19:01:52.8

**HOT-1** alright. indecent descent.

19:01:58.3

**CAM-2** descent.

19:02:02.3

**HOT-1** and we'll go tooooo (temp) [sound of click].

19:02:06.3

**CAM-1** alright.

19:02:13.5

**HOT-1** descent. descent briefing. landing altitude is set for LaGuardia.  
recall.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:02:17.5

**CAM-2** check.

19:02:18.0

**HOT-1** check.

19:02:18.9

**HOT-1** autobrake is three. landing data.

19:02:21.9

**CAM-2** vref one thirty seven. minimums two twelve.

19:02:24.3

**CAM-1** thirty one twenty seven. two twelve. approach briefing.

19:02:28.2

**CAM-2** complete.

19:02:28.8

**HOT-1** alright. descent checklist is complete.

19:02:44.5

**CAM-1** and. you're gonna do these. I'm gonna do this.

19:02:50.8

**CAM-2** (that) is correct.

**END OF PART ONE OF TRANSCRIPT**

19:02:52 EDT

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:18:01 EDT

**START OF PART TWO OF TRANSCRIPT**

19:18:08.5

**HOT-2** eight thousand set.

19:18:09.3

**HOT-1** check.

19:18:11.8

**CAM-2** she gonna put us on what a right-right downwind or what?

19:18:16.3

**CAM-1** I'm not like sure.

19:18:19.7

**CAM** [sound of c-chord, similar to altitude alert]

19:18:21.0

**CAM-2** nine for eight.

19:18:21.8

**CAM-1** nine eight.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:18:01.9

**APR-NYC**

Eastern thirty four fifty two descend and maintain eight thousand.

19:18:04.9

**RDO-1**

Eastern thirty four fifty two leaving niner thousand for eight thousand.

19:18:38.2

**APR-NYC**

Eastern thirty four fifty two turn left heading zero niner zero.

19:18:41.4

**RDO-1**

left heading zero nine zero. Eastern thirty four fifty two.



**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:18:44.2  
**CAM-1** your gett- she's vectoring you for the left downwind now.

19:18:46.7  
**CAM-2** yeah. I guess yeah.

19:18:53.9  
**HOT-2** vectoring us. not me. because you're here too. ha he ha he.

19:18:59.5  
**HOT-1** (nice). you're-you're drivin'. I'm just talkin. ha ha he ha.

19:19:02.9  
**HOT-2** well.

19:19:03.9  
**HOT-2** vectoring us. ha ha ha.

19:19:04.9  
**HOT-1** vectoring us. no problem.

19:19:13.0  
**CAM-2** I see ice on the window. look.

19:19:19.8  
**HOT-2** look. oh no. that's uh.

19:19:22.4  
**HOT-1** I think. no I think we're okay at the moment.

19:19:24.4  
**HOT-2** that's. no that's not ice. it's- I thought it was rime ice. no.

19:19:29.6  
**HOT-2** it's ahhhh. what do you call it? uhm fog?

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:19:40.6  
**APR-NYC** Eastern thirty four fifty two turn left heading zero six zero.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:19:57.5  
**CAM-?** \*

19:20:31.9  
**HOT-2** flaps one.

19:20:33.7  
**CAM** [sound of two clicks, similar to flap handle]

19:20:34.4  
**CAM-1** one.

19:20:35.3  
**CAM-1** good thing we got lots of gas right.

19:20:37.9  
**HOT-2** yeah. yeah. that's good.

19:20:40.6  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:20:43.6  
**HOT-2** I don't know. there is some rain here and here. we get some. we're gonna get wet again.

19:20:52.2  
**HOT-2** this thing is pointing up.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:19:43.6  
**RDO-1** left turning zero six zero Eastern thirty four fifty two.

19:20:26.8  
**APR-NYC** Eastern thirty four fifty two reduce speed to one eight zero.

19:20:29.6  
**RDO-1** slow to one eighty Eastern thirty four fifty two.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:20:52.5

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:20:59.8

**HOT-2** you got it there. t- ahh.

19:21:03.7

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:21:07.1

**HOT-1** yeah well I don't think we're gonna have any choice but to get wet tonight.

19:21:13.2

**HOT-2** because the f-b-o is not-is not there right? or is it? where we're parking.

19:21:19.3

**HOT-2** cause I never been to that f-b-o.

19:21:20.6

**HOT-1** that's. yeah.

19:21:21.1

**HOT-2** I been to r-real gates in LaGuardia.

19:21:22.9

**HOT-1** they will take you. they-they take you around to it. it's around the corner.

19:21:26.6

**HOT-2** okay.

19:21:28.4

**HOT-1** you're combination like the Delta Shuttle and the marine- they call it the marine terminal.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:21:37.3

**HOT-1** the only reason I know it I was here last month.

19:21:39.4

**HOT-2** yeah. never been to LaGuardia with Eastern. so I don't know.

19:21:43.3

**HOT-1** my second time.

19:21:44.7

**HOT-2** are-are you- have you ever been to the real gates in LaGuardia?

19:21:48.0

**HOT-1** yeah.

19:21:48.5

**HOT-2** okay.

19:21:48.5

**HOT-1** back-back in ninety nine two thousand when I was with-with airways.

19:21:50.2

**HOT-2** yeah. not.

19:21:52.7

**HOT-2** I don't.

19:21:52.7

**HOT-1** so. back when it MetroJet.

19:21:55.2

**HOT-2** pain in the #. when you land you have to tell them that you landed. then call the gates. and then call ground and tell them that the gate is open. I don't know if it was like that before but.

19:22:06.9

**HOT-1** where you're working with ground and gate control and.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:22:09.1

**HOT-2** yes. yeap. three years ago it was like that.

19:22:10.1

**HOT-1** you know. yeah.

19:22:12.5

**HOT-2** you-you after you land you have to call the ah ramp. make sure the gate is open. and have to let ground know that the gate is open.

19:22:13.8

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:22:18.5

**HOT-1** yeah I've had it take an hour to get to the gate wh- after landing before.

19:22:22.3

**HOT-2** yeah LaGuardia. la garbage.

19:22:24.7

**HOT-1** ha ha.

19:22:25.4

**CAM-2** all these places in New York. j-f-k.

19:22:32.5

**HOT-1** hey it's number one on my place if I never go back there in my lifetime it's okay.

19:22:37.0

**HOT-1** Philly's number two. Havana's number three. ha ha.

19:22:42.0

**HOT-2** now doing a visual during the day in LaGuardia is nice. they-they have you go direct to the statue. over the river. follow the river. it's-it's kind of cool.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:22:48.0  
**HOT-1** yeah.

19:23:06.4  
**HOT-2** four thousand set.

19:23:07.4  
**HOT-1** check.

19:23:08.3  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:23:17.6  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:23:26.0  
**HOT-1** and so we're gonna do a four thousand foot downwind twenty five miles away from the airport.

19:23:40.5  
**HOT-2** heading zero two zero.

19:23:47.4  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:22:59.7  
**APR-NYC** Eastern thirty four fifty two descend and maintain four thousand.

19:23:03.2  
**RDO-1** Eastern thirty four fifty two leaving eight thousand descending four thousand.

19:23:33.1  
**APR-NYC** Eastern thirty four fifty two turn left heading zero two zero.

19:23:36.1  
**RDO-1** zero two zero on the heading Eastern thirty four fifty two.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:24:00.7  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:24:08.5  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:24:33.1  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:24:46.4  
**HOT-1** don't worry about it.

19:24:46.5  
**HOT-2** I guess this is a good heading also for the rain and everything.

19:24:59.7  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:25:09.6  
**HOT-1** \* flaps one. I get lights too on (that one) [sound of click].

19:25:13.4  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:25:19.5  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:25:28.4  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:25:38.9  
**HOT-2** I hope @ doesn't call us asking how lon- how much longer.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:24:41.9  
**MISC-AC** say again for sixty three thirty four.

19:24:43.6  
**APR-NYC** disregard.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:25:40.0  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:25:43.1  
**HOT-?** haaaa ha ha ha.

19:25:47.2  
**HOT-2** ah-ohhh five four.

19:25:47.2  
**CAM** [sound of c-chord, similar to altitude alert]

19:25:50.2  
**HOT-1** five four.

19:25:51.4  
**HOT-?** sss ha ha ha.

19:25:54.1  
**HOT-2** what an interesting trip.

19:25:58.5  
**HOT-2** the most important thing is that we're safe. you know. we've been safe all the time. so.

19:26:03.3  
**HOT-1** ah these two are pretty good girls. you know. they try really hard.

19:26:06.4  
**HOT-2** yeah.

19:26:08.9  
**HOT-2** you know what this lady said. that they are here because of the (pretty) faces. she said that.

19:26:15.6  
**CAM-2** so wrong man. she's.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**



**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:26:17.5

**CAM-1** @?

19:26:18.2

**CAM-2** yeah. she said that.

19:26:18.8

**CAM-1** wow.

19:26:20.2

**HOT-2** they're here because of the pretty faces.

19:26:22.7

**HOT-2** well. guess what. they hired ugly people here too.

19:26:25.7

**CAM-?** sss.

19:26:31.5

**HOT-2** four thouuuusand.

19:26:32.3

**HOT-1** looks like we're in a right downwind.

19:26:34.3

**HOT-2** yeah.

19:26:35.8

**HOT-1** I thought we were gonna be in a left but. ha ha.

19:26:38.8

**HOT-2** man is it. bad weather here.

19:26:40.0

**HOT-1** yeah there-there. they're sending us out.

19:26:41.0

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:26:43.0  
**CAM-1** \* up over Connecticut.

19:26:45.9  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:27:07.7  
**HOT-2** [exhale, breathy] yeah. a-okay.

19:27:28.8  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:27:38.8  
**HOT-1** (are we huh).

19:27:39.5  
**HOT-2** okay. that's all we have.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:27:16.4  
**APR-NYC** Eastern thirty four fifty two turn right heading zero four zero.  
final approach one three four niner. good night.

19:27:22.3  
**RDO-1** right zero four zero final thirty four nine Eastern thirty four fifty  
two.

19:27:29.9  
**RDO-1** ah New York ah final Eastern thirty four fifty two is checking in  
four thousand.

19:27:34.3  
**APR-FINAL** Eastern thirty four fifty two New York altimeter is three zero  
one two.

19:27:37.2  
**RDO-1** twelve.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:27:40.6  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:27:53.8  
**HOT-2** ahh wipers.

19:27:56.0  
**CAM-1** right there. right there.

19:27:56.5  
**CAM-2** I clean it.

19:27:58.0  
**CAM** [sound of woop-woop-squeegee, similar to wipers for 8 seconds]

19:28:00.2  
**CAM-2** clean the glass a little bit.

19:28:25.8  
**HOT-2** no more good weather anymore @.

19:28:28.1  
**HOT-2** we're gonna be hanging out here for a while.

19:28:33.9  
**HOT-1** maybe-maybe Carolinas tomorrow will be better.

19:28:40.4  
**HOT-2** I heard there is a hurricane down there waiting for us.

19:28:43.1  
**HOT-1&2** [laughter]

19:28:47.2  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:28:47.3  
**CAM-2** here is that speed. ten plus.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:28:50.2

**CAM-1** yeah.

19:28:51.3

**CAM-1** well. the rain's real. ha ha.

19:28:55.4

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:28:58.9

**HOT-2** what is the speed limit for the wipers.

19:29:01.0

**HOT-2** two hundred and fifty knots. I don't know.

19:29:02.7

**HOT-2** it doesn't say in the limitations.

19:29:03.1

**HOT-1** I've never seen it. I've never read one.

19:29:04.9

**HOT-2** yeah.

19:29:06.0

**HOT-2** I had that one in the other plane. two hundred and fifty knots is the limit for the wipers.

19:29:10.4

**HOT-2** this one doesn't have it.

19:29:17.1

**HOT-2** here we go again.

19:29:18.4

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:29:19.1

**HOT-2** heavy rain. continuous okay.

19:29:24.6

**HOT-1** can you get the radio for just a sec.

19:29:26.0

**HOT-2** alright.

19:29:26.3

**HOT-1** I want to sit th- I want-want them to be seated.

19:29:27.9

**HOT** [sound of 388Hz oscillating tone for about 9 seconds, only on HOT-1 channel]

19:29:28.4

**HOT-2** okay.

19:29:31.2

**CAM** [sound of two clicks]

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:29:37.2

**APR-FINAL** [blocked radio transmission]

19:29:38.4

**INT-3** \*\*.

19:29:39.7

**INT-1** hey guys it's @. it's gonna be raining the rest of the way in. so I want you guys to finish up and get seated. okay.

19:29:41.2

**RDO-2** blocked.

19:29:41.7

**APR-FINAL** blocked. Eastern thirty five fifty two [sic] turn left zero one zero.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:29:44.3  
**INT-3** we're seated and (everyone) front \*.

19:29:46.0  
**INT-1** alright thanks.

19:29:48.1  
**INT-3** \*\*.

19:29:50.1  
**HOT-2** we got heading zero one zero.

19:29:51.0  
**HOT-1** zero one zero roger that. I'm back with you. I got the radios.

19:29:52.5  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:29:55.3  
**HOT-1** she said they were seated so.

19:29:56.7  
**HOT-2** okay.

19:29:58.5  
**HOT-2** I guess they know.

19:30:01.7  
**HOT-2** if she look outside the window it's not pretty.

19:30:05.3  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:30:08.2  
**HOT-1** we didn't lie to 'em.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:29:44.7  
**RDO-2** heading zero one zero Eastern thirty four fifty two.

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:30:10.3

**HOT-1&2** [laughter]

19:30:21.4

**HOT-2** [groan]

19:30:22.4

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:30:29.0

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:30:37.3

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:30:43.4

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:30:53.9

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:30:55.5

**HOT-2** now heavy rain on final.

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:31:02.0

**APR-FINAL** Eastern ah thirty four fifty two turn right heading zero seven zero.

19:31:06.0

**RDO-1** ah right zero seven zero Eastern thirty four fifty two.

19:31:12.3

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:31:28.7

**HOT-2** why do we have to play video games in the middle of the rain. at four thousand feet.

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:31:32.9

**HOT-1** yeah really.

19:31:34.0

**HOT-2** he ha. how-why don't we do this at home.

19:31:37.4

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:31:38.8

**HOT-1** we're chasing that guy ha ha ha.

19:31:41.1

**HOT-2** okay.

19:31:42.6

**HOT-2** but they said maintain one eighty.

19:31:44.7

**HOT-1** yeap.

19:31:45.4

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:31:52.4

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:32:16.8

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:32:40.8

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:32:41.9

**HOT-1** \* I'm joining you on the localizer.

19:32:45.8

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**



**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:33:32.2  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:33:37.1  
**HOT-2** [humming]

19:33:45.4  
**CAM-2** three thousand set (flaps).

19:33:47.8  
**CAM-1** five?

19:33:48.1  
**CAM-2** flaps five.

19:33:48.8  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:33:50.1  
**HOT-2** thank you.

19:33:52.7  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:33:22.5  
**APR-FINAL** Eastern thirty four fifty two turn right heading one three zero.

19:33:25.3  
**RDO-1** right heading one three zero Eastern thirty four fifty two.

19:33:39.0  
**APR-FINAL** Eastern thirty four fifty two descend and maintain three thousand.

19:33:41.9  
**RDO-1** Eastern thirty four fifty two is leaving four thousand descending three thousand.

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:33:52.7  
**HOT-1** no problem. check.

19:33:55.0  
**HOT-1** and it's gonna get wet. it's all we can say.

19:33:57.3  
**HOT-2** yeah.

19:33:58.4  
**CAM** [sound of c-chord, similar to altitude alert]

19:33:59.5  
**HOT-2** four for three.

19:34:00.8  
**HOT-1** check.

19:34:36.7  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:34:42.6  
**HOT-2** okay. localizer.

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:34:26.1  
**APR-FINAL** Eastern thirty four fifty two turn right heading two zero zero. intercept localizer.

19:34:30.3  
**RDO-1** two zero zero join the localizer. Eastern thirty four fifty two. can we start slowin' her back?

19:34:37.9  
**APR-FINAL** you can reduce to one seventy for now.

19:34:39.8  
**RDO-1** one seventy for now. Eastern thirty four fifty two.

<u>TIME and SOURCE</u>	<u>INTRA-AIRCRAFT CONTENT</u>
19:34:44.3 <b>HOT-1</b>	roger that.
19:34:44.9 <b>HOT-2</b>	one seventy.
19:34:45.8 <b>HOT-1</b>	I'm gonna give them the two dings.
19:34:47.5 <b>CAM-2</b>	sounds good.
19:34:48.3 <b>CAM</b>	[sound of two clicks]
19:34:50.6 <b>CAM</b>	[sound of two clicks]
19:34:58.3 <b>CAM</b>	[sound of swish-swish-click, similar to pitch-trim wheel in motion]
19:34:58.8 <b>CAM-2</b>	that's gonna leave us high. because. we need to go down to two thousand.
19:35:05.5 <b>CAM</b>	[sound of swish-swish-click, similar to pitch-trim wheel in motion]
19:35:06.9 <b>HOT-2</b>	two thousand set.

<u>TIME and SOURCE</u>	<u>AIR-GROUND COMMUNICATION CONTENT</u>
19:35:01.2 <b>APR-FINAL</b>	Eastern thirty four fifty two descend and maintain two thousand.
19:35:04.0 <b>RDO-1</b>	Eastern thirty four fifty two leaving three for two thousand.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:35:07.8

**CAM-1** check.

19:35:08.3

**HOT-2** this is not a good heading to intercept.

19:35:10.9

**HOT-2** make a heading ah ah one nine zero.

19:35:12.9

**HOT-2** please. no?

19:35:15.0

**HOT-2** cause see. look.

19:35:16.4

**HOT-2** ah whatever.

19:35:16.9

**CAM** [sound of c-chord, similar to altitude alert]

19:35:17.3

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:35:18.1

**HOT-1** it's too late now...

19:35:18.5

**HOT-2** three for two yeah.

19:35:19.3

**HOT-1** ...I know what he's doin'.

19:35:20.2

**HOT-2** it's this guy here.

19:35:21.0

**HOT-1** right.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:35:21.5

**HOT-2** yeah.

19:35:25.0

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:35:27.0

**HOT-2** [inhale] okay GREKO is the final approach fix. we're there. [exhale] ah we're still ah. six miles from there.

19:35:34.5

**HOT-1** yeap.

19:36:05.0

**HOT-2** cleared for the approach. approach ah selected.

19:36:06.4

**HOT-1** yeap.

19:36:12.5

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:36:16.5

**HOT-1** we're only three and half miles behind him so I'd be cautious on your speed with that.

19:36:22.0

**HOT-2** he said maintain one \*\*\*. (just) slow down.

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:35:55.7

**APR-FINAL**

Eastern thirty four fifty two maintain two thousand till established localizer. cleared i-l-s two two.

19:36:00.4

**RDO-1**

two thousand till established cleared the i-l-s ah approach Eastern thirty four sixty [sic] two.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:36:23.5

**HOT-1** you're (now) cleared the approach so screw that.

19:36:25.0

**HOT-2** yeah so let's say ah. flaps ah. gear down flaps fifteen.

19:36:30.1

**HOT-1** \* gear down flaps fifteen.

19:36:31.4

**CAM** [sound of increased noise, similar to nose gear door opening]

19:36:31.9

**CAM-2** ahhh.

19:36:34.2

**HOT-2** this thing is not working so you do it.

19:36:37.1

**HOT-1** yeap I got that.

19:36:38.6

**HOT-2** okay.

19:36:44.0

**HOT-1** we are cleared the approach [sound of click] I got the approach lights on.

19:36:46.5

**HOT-2** nice.

19:36:49.4

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:36:51.4

**HOT-1** glideslope's alive anyway.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:37:12.6  
**HOT-2** and let's do flaps thirty landing checklist and ah ss-ss configure early.

19:37:26.9  
**HOT-2** flaps thirty.

19:37:27.7  
**HOT-1** thirty.

19:37:27.7  
**HOT-2** landing checklist.

19:37:28.8  
**CAM** [sound of two clicks]

19:37:29.1  
**HOT-2** configure early.

19:37:35.4  
**HOT-2** okay.

19:37:36.6  
**CAM-1** okay localizer captured. glideslope captured.

19:37:39.3  
**HOT-2** heading two two four.

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:37:17.6  
**APR-NYC** and for Eastern thirty four fifty two contact LaGuardia Tower.

19:37:20.8  
**RDO-1** over to tower Eastern thirty four fifty two.

19:37:24.2  
**TWR** [frequency change to LaGuardia Tower]

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:37:41.5

**HOT-1** yeap and I'll give you that.

19:37:42.8

**HOT-2** and the missed approach is twentyyyy...

19:37:45.2

**HOT-1** seven hundred.

19:37:45.9

**HOT-2** ...twenty seven.

19:37:47.7

**CAM-1** I'll set it for you twenty seven hundred.

19:37:49.2

**CAM-2** thank you.

19:37:50.7

**CAM-2** okay.

19:37:52.2

**HOT-1** okay.

19:37:53.4

**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:37:54.6

**HOT-2** nice crosswind.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:37:54.5

**RDO-1**

tower Eastern thirty four fifty two is checking in i-l-s two two.

19:38:04.6

**MISC-AC**

Tower JetBlue sixteen forty ah three miles outside GREKO for two two.



**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:38:10.5  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:38:22.4  
**CAM** [sound of swish-swish-click, similar to pitch-trim wheel in motion]

19:38:29.3  
**HOT-2** awe she didn't say cleared to land.

19:38:30.6  
**HOT-1** well. I just. yeah otherwise you're gonna-

19:38:32.2  
**HOT-2** ha ha ha. you never know.

19:38:33.9  
**HOT-1** it-it doesn't friggin' matter.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:38:09.9  
**TWR** JetBlue sixty forty LaGuardia Tower. good evening. number three continue.

19:38:14.0  
**RDO-1** and New York Eastern thirty four fifty two is checking in i-l-s runway two two.

19:38:18.7  
**TWR** Eastern thirty four fifty two LaGuardia Tower good evening. number two following a c-r-j seven. three and half miles ahead. expect landing clearance ["landing clearance" spoken fast and somewhat garbled] about two miles out.

19:38:25.8  
**RDO-1** roger.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:38:36.6  
**HOT-2** a-ask her because she didn't say that.

19:38:51.3  
**HOT-1** you want your wipers at all?

19:38:53.0  
**HOT-2** yes please.

19:38:54.1  
**HOT-1** intermittent or-or low?

19:38:55.5  
**HOT-2** ah low.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:38:34.8  
**TWR** JetBlue sixteen forty if able reduce final approach speed for spacing [hum at end, similar to overlapping radio transmission].

19:38:37.4  
**MISC-AC** [hum at end, similar to overlapping radio transmission] slowin' now JetBlue sixteen forty.

19:38:39.3  
**TWR** \* JetBlue sixteen forty ah if able reduce final approach speed for spacing.

19:38:43.2  
**MISC-AC** say again.

19:38:43.9  
**TWR** if able reduce to final approach speed. for spacing [hum at end, similar to overlapping radio transmission].

19:38:46.5  
**MISC-AC** yeah we're there. a hundred forty knots.

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:38:56.4  
**HOT-1** okay you got 'em in low.

19:38:57.5  
**HOT-2** yeah. ask her if we're cleared to land because she didn't say it.

19:39:12.2  
**EGPWS** one thousand.

19:39:13.0  
**CAM-2** check.

19:39:29.8  
**CAM-2** now we're cleared to land.

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:39:01.0  
**TWR** American eight ninety traffic three out for runway two two. wind one one zero at niner. runway one three cleared for takeoff.

19:39:06.6  
**MISC-AC** runway one three cleared for takeoff American eight ninety.

19:39:16.7  
**RDO-1** and confirm Eastern ah thirty four fifty two is cleared to land.

19:39:19.8  
**TWR** Eastern thirty four fifty two. runway two two cleared to land. wind one one zero at niner. traffic departing will be in position runway one three.

19:39:26.0  
**RDO-1** cleared to land Eastern thirty four fifty two. copy traffic.

19:39:28.6  
**TWR** Air Shuttle thirty Air Shuttle sixty three thirty four left Yankee left Bravo. contact ground point seven. goodnight.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:39:35.0

**CAM-2** okay.

19:39:37.5

**HOT-2** ceiling seven hundred.

19:39:37.6

**HOT-1** approach lights twelve o'clock.

19:39:39.5

**HOT-2** in sight.

19:39:41.9

**HOT-2** okay awesome.

19:39:42.8

**HOT-1** you get- startin' to get the runway.

19:39:48.2

**HOT-1** always glad when it works out. right.

19:39:50.6

**HOT-2** yeah.

19:39:54.4

**HOT-1** er five hundred.

19:39:55.3

**EGPWS** five hundred.

19:39:56.1

**HOT-2** check.

19:39:56.8

**HOT-1** alright.

19:40:04.7

**HOT-1** do you want high or low?

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:40:06.6

**HOT-2** ah make it high. yeah. (it'll) do it better. yeah.

19:40:09.8

**CAM-1** raining like a mother #.

19:40:12.3

**HOT-2** okay autopilot's coming off.

19:40:12.9

**AWM** [sound of three low to high frequency tones, similar to autopilot disconnect]

19:40:13.5

**EGPWS** approaching minimums.

19:40:17.5

**CAM-1** cleared to land.

19:40:21.1

**EGPWS** minimums.

19:40:22.2

**HOT-2** landing.

19:40:22.9

**HOT-1** roger that.

19:40:27.4

**HOT-1** that's slightly left.

19:40:31.6

**EGPWS** one hundred.

19:40:35.1

**EGPWS** fifty.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:40:38.2  
**EGPWS** thirty.

19:40:40.3  
**EGPWS** twenty.

19:40:43.3  
**CAM-1** \*\* down.

19:40:46.0  
**EGPWS** ten.

19:40:46.6  
**CAM-1** down down down down you're three thousand feet remaining.

19:40:52.1  
**CAM** [sound of rumble, similar to touchdown]

19:40:55.3  
**CAM** [sound of rumble, similar to touchdown]

19:40:56.4  
**CAM** [sound of rumble, similar to touchdown]

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:40:37.4  
**TWR**

\* thirty seven fifty three traffic two and half out for runway two two. runway one three cleared for takeoff.

19:40:42.2  
**MISC-AC**

cleared for takeoff on one three Endeavor thirty seven fifty three.

19:40:51.2  
**MISC-AC**

looking for landing clearance for JetBlue sixteen forty.

19:40:54.5  
**TWR**

JetBlue sixteen forty runway two two cleared to land. traffic holding position one three.

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:40:57.3  
**HOT-2** manual braking.

19:41:00.6  
**CAM-?** \*\*.

19:41:01.9  
**CAM** [sound of increased background sound, similar to thrust reverser application]

19:41:03.4  
**CAM** [sound of click]

19:41:05.3  
**HOT-1** ahhhh.

19:41:07.4  
**HOT-1** errhm [sound of exertion].

19:41:08.3  
**CAM** [sound of rattle and rumble, similar to exiting runway]

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:40:58.5  
**MISC-AC** cleared to land JetBlue sixteen forty.

19:41:00.7  
**TWR** Eastern stop stop Eastern.

19:41:08.3  
**TWR** go around. go around. JetBlue sixteen forty.

19:41:10.8  
**TWR** fly runway heading climb [portion prior to "maintain" had a hum background, similar to simultaneous transmission with JetBlue 1640] maintain two thousand.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:41:11.2  
**HOT-1** #. \*\*.

19:41:15.9  
**CAM** [sound of decreased background noise, similar to reduction of thrust  
reversers]

19:41:18.1  
**CAM** [sound of thump, thump, thump, similar to wipers, continues for next  
9 seconds]

19:41:24.5  
**HOT-2** should have go around.

19:41:25.2  
**PA-1** remain seated. remain seated.

19:41:27.4  
**HOT-1** see that's what.

19:41:30.5  
**HOT-1** # me.

19:41:35.4  
**CAM-1** my career just ended.

19:41:37.3  
**HOT-2** we should have went around.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:41:10.8  
**MISC-AC** JetBlue sixteen forty on the go [sound of hum, similar to  
simultaneous transmission with tower].

19:41:13.5  
**TWR** we have an issue on the ah airport.

19:41:19.2  
**TWR** we have ah emergency in the airport.



**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:41:38.3  
**HOT-1** yeap.

19:41:40.0  
**HOT-2** #.

19:41:40.5  
**HOT-1** [exhale]

19:41:48.8  
**HOT-2** this is crazy man.

19:41:51.6  
**HOT-2** ah #.

19:41:52.1  
**HOT** [sound of 388Hz oscillating tone for about 42 seconds, only on HOT-1 channel]

19:41:53.3  
**HOT-2** unbelievable.

19:41:54.5  
**HOT-1** okay. get the a-p-u running right now.

19:42:20.3  
**HOT-1** that's why I wanted to do the approach before but.

19:42:23.1  
**HOT-1** alright we're good.

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:41:42.2  
**TWR** Eastern Jet thirty four fifty two we're getting help for you.

19:41:44.6  
**RDO-1** roger that if you roll the equipment everything is ah good here.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:42:24.8

**HOT-1** alright get the a-p-u up.

19:42:27.0

**HOT-1** alright. let me make a ph-

19:42:29.4

**HOT-1** I don't even have anything to d-

19:42:31.0

**HOT-2** [exhale] #.

19:42:33.1

**HOT** [sound of hi-lo chime, similar to call chime]

19:42:35.1

**INT-3** this is @.

19:42:36.2

**INT-1** yeah this is @. ah is everybody okay back there?

19:42:39.1

**INT-3** every. every. yes. soul is okay.

19:42:42.2

**INT-1** okay. have everybody remain seated. they have equipment on the way to us. ah we ended up not stopping. sliding off the end of the runway. so just standby. they're gonna get the equipment here as soon as we get the a-p-u running we'll be shutting the engines down.

19:42:53.7

**INT-3** okay.

19:42:55.0

**CAM-?** \*\*.

19:42:55.4

**PA-3** ladies and gentlemen please remain seated.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:43:01.5  
**CAM-1** alright parking brake set [sound of click].

19:43:08.2  
**CAM** [sound of single chime]

19:43:17.6  
**CAM-1** okay. e-e-engines.

19:43:22.4  
**CAM-1** they're-they're shut down.

19:43:23.1  
**CAM** [sound of single chime]

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:43:09.0  
**TWR** any Port vehicles on this frequency. LaGuardia Tower.

19:43:11.4  
**PORT** go ahead Tower you got nine zero.

19:43:13.0  
**TWR** alright you aware of the ah the accident correct?

19:43:15.6  
**PORT** affirmative. on my way.

19:43:17.2  
**TWR** roger. we're not getting anybody out. runways are closed right now. just let me know ah further assistance.

19:43:23.1  
**PORT** Tower the airport is closed at this time.

19:43:26.5  
**TWR** airport closed. roger. airport is closed.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:43:28.9

**INT-1** ah you called.

19:43:29.9

**INT-3** yes. I have a secret service agent who needs to talk to you.

19:43:33.3

**INT-1** alright. put him on momentarily.

19:43:53.4

**CAM-2** holy #.

19:43:54.2

**CAM-1** \*\*.

19:43:56.4

**CAM-1** my career just ended.

19:43:58.8

**INT-3** \*\*\*.

19:43:59.1

**CAM-2** mine too.

19:44:05.4

**CAM** [sound of 5 knocks, similar to knock at cockpit door]

19:44:12.7

**CAM-2** I guess (we're all fine) that's the important thing.

19:44:13.0

**CAM** [sound of hi-lo chime, similar to call chime]

19:44:14.5

**INT-3** this is @.

19:44:15.8

**INT-1** yeah @ is that the secret service agent there.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:44:18.6

**INT-3** I'll have him. speak to you.

19:44:20.1

**INT-1** okay well somebody just knocked on the door so I'm confirming.

19:44:22.1

**INT-3** yeah that's him. but I'll pass this over to you- to him okay.

19:44:25.2

**INT-1** oh roger that.

19:44:26.1

**INT-3** okay.

19:44:27.9

**INT-4** sir. it's the secret service.

19:44:29.4

**INT-1** yessir.

19:44:30.0

**INT-4** hey can you open the door.

19:44:31.0

**INT-1** okay doin' that now.

19:44:32.4

**INT-4** thank you.

19:44:34.0

**CAM** [sound of rustling, similar to cockpit door opening]

19:44:38.8

**CAM-4** what's the situation?

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:44:39.9  
**CAM-1** okay. we're off the e-end of the edge of the runway. emergency is equipment is running. the engines are shutdown. we are on the a-p-u power. so just stand by they'll have equipment to us momentarily.

19:44:47.1  
**CAM-4** okay we have no other issues? we don't need to evacuate the plane or anything?

19:44:50.4  
**CAM-1** no other issues with the airplane. there is no need to evacuate.

19:44:52.8  
**CAM-4** the gear is intact and all that?

19:44:54.3  
**CAM-1** the gear is showing intact. yessir.

19:44:56.5  
**CAM-4** okay.

19:44:57.2  
**CAM-1** alright.

19:44:57.2  
**CAM-4** and where are we?

19:44:57.9  
**CAM-2** right. the runway's right there.

19:44:58.6  
**CAM-1** right at the very end- right at the very end of the runway.

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:44:57.6  
**PORT** a Tower Car nine zero.

19:44:59.0  
**TWR** Car nine zero. LaGuardia Tower.

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:45:03.1  
**CAM-4** alright thanks.

19:45:04.2  
**CAM-5** nice. nice job.

19:45:05.2  
**CAM-1** huh.

19:45:05.8  
**CAM-5** nice job.

19:45:08.2  
**CAM-5** you stopped it at least.

19:45:39.5  
**CAM-1** do a shutdown checklist.

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:45:00.6  
**PORT** Tower the aircraft is off the runway on the right side of the arrestor bed. it looks like it's intact. we are on the scene. ah I'll keep you advised.

19:45:11.7  
**TWR** roger. thank you Car nine zero.

19:45:18.8  
**RDO-1** and ah vehicle on ground this is Eastern thirty four fifty two.

19:45:23.1  
**TWR** yeah it's Eastern ah thirty four fifty two. correct. let me confirm that.

19:45:28.2  
**RDO-1** that is affirmative. thirty four fifty two.

19:45:34.2  
**TWR** yes it is a Boeing seven thirty seven.

**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:45:43.0  
**CAM-2** okay.

19:45:45.1  
**CAM-2** I'm gonna leave this on.

19:45:46.6  
**CAM-1** yeah the leave the beacon on.

19:45:47.1  
**CAM-2** beacon.

19:45:50.1  
**CAM-2** and the flaps. are down. leave em up. put em up. because I didn't want to use electric. you never know.

19:45:56.5  
**CAM** [sound of loud snap and rustle, similar to cockpit window opening]

19:46:07.6  
**CAM-1** can you bring us a set of stairs out to it. because we are intact at where we sit.

19:46:13.2  
**CAM-1** and everything's okay on the airplane. everybody's okay on the airplane. yeah we're- everybody's good.

19:46:30.8  
**CAM-1** well can you put one at the back-back door?

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:46:00.9  
**FIRSTRES** ground is really soft so I don't know if we can get \*\*\*.

19:46:14.8  
**FIRSTRES** everybody's okay?

19:46:19.1  
**FIRSTRES** \*\* arrestor \*\* ground soft \*\* wet \*\* know what I mean \*\*\*.



**TIME and SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:46:38.9  
**CAM-?** \*\*\*.

19:46:45.0  
**CAM-?** #.

19:46:48.5  
**CAM-2** and we had the fuel to do it an hour ago.

19:46:56.3  
**CAM-2** so we're going home tomorrow.

19:47:02.2  
**CAM** [sound of rustling]

19:47:06.2  
**INT-3** \*\* okay.

19:47:08.0  
**CAM-1** thirty seven passengers.

19:47:11.2  
**CAM-1** no injuries.

19:47:12.8  
**INT-3** sounds like he's on the phone.

19:47:16.7  
**CAM-2** we're gonna be on the news. \* the governor.

**TIME and SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:47:05.6  
**FIRSTRES** sir how many passengers do you have?

19:47:10.1  
**FIRSTRES** no injuries?

19:47:35.0  
**FIRSTRES** \* how many passengers do you have on board?

**TIME and  
SOURCE**

**INTRA-AIRCRAFT CONTENT**

19:47:40.0  
**CAM-1** thirty seven passengers.

19:47:56.0  
**CAM-1** see unfortunately. I should have gone straight ahead and we would have been fine. when I made the turn is when I screwed up.

19:48:00.6  
**CAM-2** yeah I was- I was- I was fighting you. because I was trying to stay on the centerline.

19:48:05.1  
**HOT** [sound of siren]

19:48:06.2  
**CAM-2** I was- I was trying to stay on the centerline and-

19:48:10.7  
**CAM-1** well.

19:48:13.7  
**CAM-2** we would have been fine. I- I- \*\*\* stay on centerline. you were fighting.

19:48:22.0  
**CAM-2** we would have broken just a few lights and that's it.

**END OF PART TWO OF TRANSCRIPT**

**END OF RECORDING**

19:48:32 EDT

**TIME and  
SOURCE**

**AIR-GROUND COMMUNICATION CONTENT**

19:47:41.8  
**FIRSTRES** thank you.