

# Airport Improvement



## Washington Dulles Stays Braced for Winter Storms

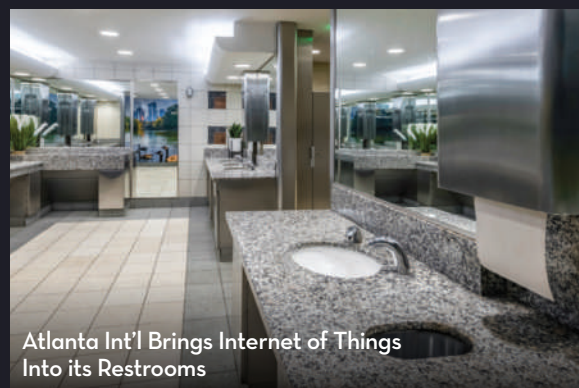


## Portland Int'l Mounts Multibillion-Dollar Capital Campaign to Stay on Top

AIRPORT STORIES INSIDE: ATL | BNA | DFW | HNL | IAD | JAN | MIA | MSP | PDX | PUW | SAV | TLH | YXY



Hawaiian Airports Debut New Check-in Kiosks  
& Self-Adhesive Bag Tags



Atlanta Int'l Brings Internet of Things  
Into its Restrooms



ARRIVALS				
To	Flight #	Gate	Time	Status
Denver	Southwest 1432		8:20 A	
Detroit	DELTA 1662	B7	7:03 P	
Detroit	Southwest 5441	C13	9:15 P	
Detroit	DELTA 2973	B4	6:00 A	
FL Lauderdale	Southwest 686	C14	7:25 P	
FL Lauderdale	Southwest 5790		6:05 A	
FL Lauderdale	Southwest 1151		6:45 A	
Houston-Hobby	Southwest 5770		5:05 A	
Jacksonville	Southwest 260	C15	9:20 P	
Jacksonville	Southwest 1197		8:05 A	
Jacksonville	Southwest 1432		8:20 A	
Kansas City	Southwest 952	C15	8:05 P	
Kansas City	Southwest 1316		6:55 A	
Las Vegas	Southwest 473	C17	7:35 P	
Las Vegas	spirit 1838	A1	9:40 P	
Las Vegas	Southwest 212		6:45 A	
Las Vegas	Southwest 2148		8:20 A	
London-LHR	BRITISH AIRWAYS 222	B11	7:10 P	
Los Angeles	Southwest 4045	C7	8:05 P	
Los Angeles	Southwest 781		6:55 A	
Los Angeles	American 1092	C3	7:29 A	
Miami	American 2831	C10	5:45 A	
Milwaukee	Southwest 519	C25	9:30 P	
Minneapolis	Southwest 789	C7	6:55 P	Boarding
Minneapolis	DELTA 2331	B9	5:50 A	
Minneapolis	Southwest 5326		8:15 A	
New Orleans	Southwest 462	C19	7:10 P	
New York-JFK	American 3543	C10	6:46 A	
New York-LGA	Southwest 1198	C20	6:45 P	Departed
New York-LGA	DELTA 4842	B5	6:59 P	
New York-LGA	Southwest 672		5:45 A	
New York-LGA	American 4444	C10	7:07 A	

Tuesday, January 28, 2020

**DEPARTURES**

DEPARTURES				
To	Flight #	Gate	Time	Status
New York-LGA	DELTA 3698	B5	7:30 A	
Newark	UNITED 3993	A3	7:15 P	
Norfolk	Southwest 1098		6:20 A	
Oakland	Southwest 781		6:55 A	
Orlando	Southwest 110	C25	7:05 P	Boarding
Orlando	Southwest 1108	C22	7:35 P	
Orlando	Southwest 5781		5:30 A	
Panama City-ECP	Southwest 5003	C18	6:55 P	Boarding
Pensacola	Southwest 1155	C21	7:10 P	
Philadelphia	FRONTIER 2306	B12	7:38 P	
Philadelphia	Southwest 927	C17	9:15 P	
Philadelphia	Southwest 1314		6:00 A	
Phoenix	American 853	C5	6:22 A	
Pittsburgh	Southwest 2202		6:00 A	
Pittsburgh	Southwest 1110	C16	9:40 P	
Raleigh/Durham	DELTA 6250	B3	7:55 P	
Raleigh/Durham	Southwest 35	C21	9:15 P	
Salt Lake City	DELTA 878	B3	6:40 P	Departed
San Antonio	Southwest 450	C18	8:00 P	
San Diego	Southwest 506		8:20 A	
Seattle	Southwest 2202		6:00 A	
Seattle	DELTA 2776	B3	7:15 A	
St. Louis	Southwest 522	C13	7:05 P	Boarding
Tampa	Southwest 547	C14	8:35 P	
Tampa	Southwest 1151		6:45 A	
Tampa	spirit 1651	A1	7:05 A	
Tupelo, MS	CONQUEST 3006	B9	6:45 P	
Washington-DCA	Southwest 1338	C9	9:15 P	
Washington-DCA	American 4616	C8	6:04 A	
Washington-DCA	Southwest 1536		7:40 A	
Washington-IAD	UNITED 6018	A4	6:45 P	Departed
Wichita	Southwest 522	C13	7:05 P	Boarding

Tuesday, January 28, 2020

**DEPARTURES**

# Updated Info & Public Address Systems Reflect the New Vision at Nashville Int'l

BY KRISTIN V. SHAW



Flight information display systems (FIDS) are a passenger's lifeline. With all the crucial information travelers need to get to their gates on time, they're bound to create an impression on visitors. The real question is whether that impression is positive or negative.

As Nashville International Airport (BNA) kicked off a dynamic growth and expansion plan known as *BNA Vision*, updating the FIDS and public address system dovetailed nicely with the nearly \$1.4 billion initiative.

"Travel can be very stressful. The more we can do to give customers readily available information at their fingertips, the better," says Vanessa Hickman, assistant vice president of Information Technology at BNA. "We want our passengers to see very quickly their departures or arrivals. If we can alleviate stress, they can spend more time relaxing and engaging in more revenue-generating activities like food and retail."



VANESSA HICKMAN



BNA ARRIVALS 6:45 PM CST					
From	Flight #	Claim	Time	Status	
Atlanta	Southwest 1987	6	6:30 P	Arrived	
Atlanta	DELTA 932	6	6:48 P	Arrived	
Atlanta	DELTA 1173	6	8:08 P	Now 7:59 PM	
Baltimore	Southwest 2167	6	6:55 P	Arrived	
Baltimore	Southwest 1261	4	7:30 P	Now 7:20 PM	
Charlotte, NC	American 2306	1	7:01 P	Now 7:02 PM	
Chicago-MDW	Southwest 410	6	6:20 P	Arrived	
Chicago-MDW	Southwest 2167	6	6:55 P	Arrived	
Chicago-O'Hare	UNITED 5518	7	7:52 P	Now 7:44 PM	
Chicago-O'Hare	American 3227	2	8:12 P	Now 8:09 PM	
Dallas - DFW	American 1076	1	8:23 P		
Dallas (Love)	Southwest 1261	4	7:30 P	Now 7:20 PM	
Denver	Southwest 5003	3	6:10 P	Arrived	
Denver	Southwest 5743	5	7:20 P	Now 7:10 PM	
Denver	Southwest 1480	3	7:55 P	Now 8:05 PM	
Detroit	Southwest 410	6	6:20 P	Arrived	
Fort Lauderdale	spirit 222	8	7:21 P	InFlight	
Houston-Hobby	Southwest 686	3	6:30 P	ARRIVED	
Las Vegas	Southwest 1697	4	7:15 P	Now 7:05 PM	
Las Vegas	Southwest 952	3	7:30 P	Now 7:05 PM	
Manchester	Southwest 1155	3	6:35 P	Arrived	
Minneapolis	Southwest 1480	3	7:55 P	Now 8:05 PM	
New York-LGA	Southwest 1107	3	7:10 P	Now 7:00 PM	
Oklahoma City	Southwest 952	3	7:30 P	Now 7:05 PM	
Orlando	Southwest 1987	6	6:30 P	Arrived	
Orlando	Southwest 1155	3	6:35 P	Arrived	
Philadelphia	Southwest 5003	3	6:10 P	Arrived	
Philadelphia	FRONTIER 2307	6,7	6:43 P	Arrived	
Phoenix	Southwest 1229	6	7:35 P	Now 7:15 PM	
Raleigh/Durham	DELTA 6250	6	7:20 P	Arrived	
San Diego	Southwest 1229	6	7:35 P	Now 7:15 PM	
St. Louis	Southwest 547	4	8:00 P		

BNA BAG CLAIM 6:45 PM			
From	Flight #	Claim	
Atlanta	Southwest 1987	6	
Baltimore	DELTA 932	6	
Boston	Southwest 2167	6	
Charlotte, NC	Southwest 1650	6	
Chicago-MDW	American 2306	1	
Chicago-MDW	Southwest 410	6	
Chicago-MDW	Southwest 2167	6	
Denver	Southwest 5003	3	
Denver	Southwest 5743	5	
Detroit	Southwest 410	6	
Detroit	DELTA 1662	7	
Fort Lauderdale	spirit 222	8	
Houston-Hobby	Southwest 686	3	
Las Vegas	Southwest 1697	4	
Las Vegas	Southwest 952	3	
Manchester	Southwest 1155	3	
New York-LGA	Southwest 1107	3	
Oklahoma City	Southwest 952	3	
Orlando	Southwest 1987	6	
Orlando	Southwest 1155	3	
Philadelphia	Southwest 5003	3	
Philadelphia	FRONTIER 2307	6,7	
Phoenix	Southwest 1130	6	
Phoenix	Southwest 1229	6	
Pittsburgh	Southwest 1130	6	
Raleigh/Durham	DELTA 6250	6	
San Diego	Southwest 1229	6	

6:45 PM

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ARRIVALS

ARRIVALS

## FACTS&FIGURES

**Project:** Upgrading Audio/Visual Communications

**Primary Components:** New Public Address System; Flight Information Display System; Electronic Video Display System

**Location:** Nashville Int'l Airport

**Cost:** \$5.9 million

**Design:** Late 2016 – Jan. 2018

**Construction/Installation:** Spring 2018

**System Activated:** Aug. 2019

**Prime Consultant/Engineering Design:** Arora Engineers

**Design:** Gresham Smith

**Design Support:** Connico

**Prime Contractor/System Integrator:** International Display Systems

**Public Address System Software:** Simpleway

**Public Address System Hardware:** QSC

**FIDS Software & Flight Data:** Infax

**Content Management Software:** Omnivex

**Content Management Software/FIDS Integration:** Infax

During a recent \$5.9 million project, crews replaced the entire FIDS, public address (PA) and electronic video display system (EVIDS) at the airport. The new EVIDS allows the airport to run video or important static content, such as emergency messaging, on any display. Previously, the displays included only flight information and weather maps.

"Now, the airport can build on top of this foundation to add all sorts of content, like video, dynamic directories, visual paging and a framework for how they present information to their customers," says Jason Shevrin, senior vice president with Arora Engineers.



JASON SHEVRIN

### Finer Points for FIDS

Arora tag-teamed with Gresham Smith, which was responsible for creating templates for all of the airport's digital signage. When Gresham Smith designed BNA's original terminal in 1986, it was the firm's first complete terminal project. In this case, the company was





The airport recently replaced all of its flight information and electronic video displays.

tasked with devising color combinations and symbols that would appeal to customers and help ease their journey through the airport. The results showed the BNA team that their FIDS could look and feel better.

"This project was fun because the airport team was very open," says Jim Harding, Gresham Smith's director of Experiential Design and Wayfinding. "We got a feel for what they were looking for: clean, crisp and friendly. With that in mind, we leaned toward lighter, brighter imagery that pops."



JIM HARDING

Harding explains that designers emphasized what is most important to passengers: the gate numbers. The new design they created incorporates a blue box to highlight and unify the row and gate numbers to draw the eye toward the gate numbers. The color scheme for the previous FIDS was dark green and blue, which felt heavy, he comments. Brighter screens gave the digital displays a fresh, clean look; and designers employed horizontal banding from white to light blue for clarity. Travelers can quickly find their cities and easily scan across for flight status, says Harding.

The new template was also designed to accommodate passengers who are colorblind.

"A couple of years ago, we led a research project and report on enhancing wayfinding for those with visual challenges," explains Harding. "We used digital filters on our design concepts to represent red/green and blue/green colorblindness, and that showed us if we were using the right level of contrast. A lot of folks might not think of that, but it gave the airport a lot of confidence the FIDS would be legible for all customers."

Gresham Smith also created a uniform look and feel for everything with information for passengers: signage, directional cues, FIDS, baggage information display systems and more. Harding emphasizes that consistency is important for passengers.

"You'd be surprised how many people don't know where to look when they deplane," agrees Shevrin. "The fonts,

## Planning And Design | Program & Construction Management Facilities Management | IT | Asset Management / IWMS



### Arora provided the following services at Nashville International Airport.

- Airport wide study and report
- All universal cabling distribution system (backbone and horizontal cabling elements)
- Large LED FIDS displays in the terminal lobby
- Facility wide FIDS and PA systems
- FIDS and Public Address Standards
- Fire Alarm and Public Address Integration

To learn more about the Nashville FIDS & Public Address — Visual Paging project: [aroraengineers.com/project/BNA-FIDS-PA](http://aroraengineers.com/project/BNA-FIDS-PA)

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colors and logos were standardized to help ensure the way is clear. It's those small details that make a difference."

Because time is an essential currency for passengers, the local Nashville time is prominently featured on headers. Customer feedback prompted the project team to add "CST" behind the numbers. When crossing multiple zones, it's easy to lose track, notes Harding. Adding to that challenge, part of Tennessee is in the Eastern time zone, and part is in the Central zone.

The FIDS can also run information about live music presented at various stages throughout BNA. "People think of Nashville as Music City, USA," says Harding. Each FIDS bank consequently has three screens for flight information and one for alternate content, including what musicians are playing where and when.

Because FIDS are such a crucial touch point for passengers, Harding encourages airports to create unique local content. "It's the extension of the airport's voice and brand, and that is really important," he explains. "If you don't think of it that way, it's a missed opportunity."

## Synchronized Sights & Sounds

Instead of building separate FIDS and PA systems, Arora proposed a universal communications system, with a single interface to deliver synchronized visual and audio announcements. The result is consistency between what passengers hear and see.

The challenge was incorporating the concept into the massive construction that was about to kick off.

"We had a paging system that was more than 15 years old," says Hickman. "The technology behind that was difficult to support, and we needed to replace it. It was a balancing act: We had this project on deck, and the BNA Vision project came up alongside it."

Disseminating safety and security information was important to airport management, so the new paging system was rolled into plans going forward.

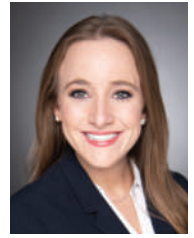
"Sometimes you have bad storms or incidents, and if we need to, we can now take over all of the screens in one isolated area or the whole terminal to tell people where they need to go," explains Hickman. "It keeps our public safe and secure, and it's easy breezy."

International Display Systems, the prime contractor and systems integrator for the project, brought in vendors including Simpleway, Omnivex, Pro Sound and Jarvis Sign. Infax provided messaging for the airport and presented flight information on displays. Infax provided FIDS software and the flight

data and integrated the Omnivex content management, which is also integrated with Simpleway's public address software.

Because it was already furnishing the security checkpoint wait-time monitors, the company integrated that information as well.

"Our unified solutions integrated smoothly into the airport's public address system for consistent audio and visual messaging airport wide," says Infax Vice President Tracy Davis. "The software and integration services ensured that BNA's audio-visual passenger experience was seamless and state-of-the-art."



TRACY DAVIS



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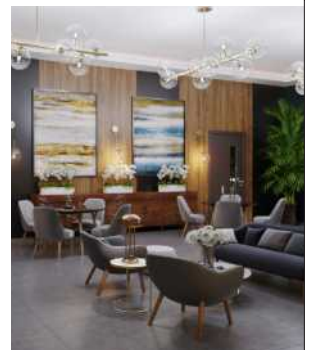
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**BNA LIVE MUSIC**  
11:07 AM

Featured Artists

**Zac Brown Band**  
2:30 PM  
Tootsies  
C Gates

**Carrie Underwood**  
5:30 PM  
Gibson  
C Gates

**Granger Smith**  
7:45 PM  
Tootsies  
A/B Gates

Artist	Location	Time	Gates
Tyler Childers	Gibson	12:00 PM	C
Turnstile	Tootsies	12:30 PM	C
Danielle Johnson	Neely's	2:00 PM	B
Wayne Hancock	Tootsies	2:30 PM	A/B
Duane Betts	Tootsies	4:30 PM	A/B
Ashlee + Evan	Gibson	4:30 PM	C
Jordan Brooker	Tootsies	6:00 PM	C
Chelsea Cutler	Tootsies	6:30 PM	A/B
Bob Dylan	Gibson	7:30 PM	C
Reba Dartin	Tootsies	8:30 PM	C

Friday August 24, 2019

**BNA WEATHER**  
11:07 AM

Local Temp: 65°F Wind: 5mph UV Index: 5

**LIVE MUSIC**

Artist	Location	Time	Gates
Tyler Childers	Gibson	12:00 PM	C
Turnstile	Tootsies	12:30 PM	C
Danielle Johnson	Neely's	2:00 PM	B
Wayne Hancock	Tootsies	2:30 PM	A/B
Duane Betts	Tootsies	4:30 PM	A/B
Ashlee + Evan	Gibson	4:30 PM	C
Jordan Brooker	Tootsies	6:00 PM	C
Chelsea Cutler	Tootsies	6:30 PM	A/B
Bob Dylan	Gibson	7:30 PM	C
Reba Dartin	Tootsies	8:30 PM	C

Friday August 24, 2019

**BNA ARRIVALS**  
11:07 AM

From	Flight #	Carrier	Class	Claim Time	Status
Atlanta	DELTA 1412	DELTA	1	6:35 AM	
Baltimore	Southwest 222	Southwest	2	6:10 AM	
Boston	DELTA 4730	DELTA	3	8:22 AM	
Charlotte	896	Southwest	3	10:32 AM	
Chicago	Southwest 4210	Southwest	1	10:34 AM	
Chicago	3763	Southwest	3	10:36 AM	
Chicago	PROTECTOR 4742	PROTECTOR	4	11:20 AM	
Chicago	UNITED 4213	UNITED	5	11:24 AM	
Chicago	Southwest 2511	Southwest	5	11:24 AM	Delayed
Dallas	Southwest 1229	Southwest	1	11:30 AM	
Dallas-Fort Worth	2363	Southwest	2	11:34 AM	Delayed
Dallas-Fort Worth	DELTA 6583	DELTA	1	11:40 AM	Delayed
Denver	Southwest 391	Southwest	4	11:40 AM	
Denver	Southwest 2545	Southwest	1	11:45 AM	
Denver	UNITED 5222	UNITED	2	12:00 PM	
Detroit	DELTA 1480	DELTA	4	12:00 PM	
Fort Lauderdale	Southwest 3471	Southwest	5	12:05 PM	
Kansas City	Southwest 1332	Southwest	2	12:15 PM	
Las Vegas	RECORD 1999	RECORD	3	12:22 PM	
Los Angeles	Southwest 1204	Southwest	1	12:22 PM	
Minneapolis	DELTA 6208	DELTA	2	12:22 PM	
New York-JFK	DELTA 5249	DELTA	4	12:24 PM	
New York-JFK	5067	Southwest	5	12:45 PM	
New York-JFK	3969	Southwest	1	12:45 PM	
New York-LGA	DELTA 3952	DELTA	1	12:47 PM	
Newark	UNITED 4160	UNITED	2	12:52 PM	
Oakland	Southwest 7	Southwest	3	12:55 PM	
Orlando	PROTECTOR 1686	PROTECTOR	5	12:55 PM	Delayed
Philadelphia	Southwest 1752	Southwest	1	1:00 PM	
Raleigh/Durham	Southwest 2486	Southwest	5	1:00 PM	
St Louis	Southwest 1376	Southwest	8	1:00 PM	
Washington-DCA	UNITED 3803	UNITED	7	1:05 PM	

Friday August 24, 2019

**BNA DEPARTURES**  
11:07 AM

Depart to	Flight #	Gate	Time	Status
Atlanta	DELTA 1412	B7	12:00 PM	
Baltimore	222	B3	1:00 PM	
Boston	DELTA 4730	B3	6:35 AM	
Charlotte	896	C3	12:55 PM	
Chicago	Southwest 4210	C10	12:22 PM	
Chicago	3763	C10	12:22 PM	
Chicago	PROTECTOR 4742	C10	12:22 PM	
Chicago	UNITED 4213	A3	12:47 PM	
Chicago	Southwest 2511	C22	1:00 PM	Delayed
Dallas	Southwest 1229	C4	12:05 PM	
Dallas-Fort Worth	2363	C3	11:40 AM	Delayed
Dallas-Fort Worth	DELTA 6583	C3	11:40 AM	Delayed
Denver	Southwest 391	B12	10:32 AM	
Denver	Southwest 2545	C19	12:15 PM	
Denver	UNITED 5222	A8	12:24 PM	
Detroit	DELTA 1480	B4	10:34 AM	
Fort Lauderdale	Southwest 3471	C14	11:20 AM	
Kansas City	Southwest 1332	C12	11:30 AM	
Las Vegas	RECORD 1999	C12	12:22 PM	
Los Angeles	Southwest 1204	C10	12:25 PM	
Minneapolis	DELTA 6208	B3	6:10 AM	
New York-JFK	DELTA 5249	B2	10:36 AM	
New York-JFK	5067	C12	11:24 AM	
New York-JFK	3969	C10	11:34 AM	
New York-LGA	DELTA 3952	C12	11:24 AM	
Newark	UNITED 4160	A7	12:52 PM	
Oakland	Southwest 7	C10	12:45 PM	
Orlando	PROTECTOR 1686	C12	12:45 PM	Delayed
Philadelphia	Southwest 1752	C9	12:00 PM	
Raleigh/Durham	Southwest 2486	C19	11:45 AM	
St Louis	Southwest 1376	C7	1:00 PM	
Washington-DCA	UNITED 3803		1:05 PM	

Friday August 24, 2019

In addition to flight information, the airport also displays details about local weather and in-terminal music performances.

## Simplifying the Process

Imagine an old-fashioned marquee that uses large plastic letters to spell out messages—and only one employee has access to the basket of letters. In contrast, digital displays make it easy and fast for a wide variety of employees to update content.

"It was important to us because we want to make sure we're providing the best service for our traveling public," says Hickman. "The system we had in place was functional, but we wanted to give our end users the chance to not have to rely so much on IT."

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Previously, personnel had to record an announcement, and then hand it off to more technical staff members in the IT department who could access the paging system. With the new system, any trained and authorized employee can enter an announcement on the network and automatically direct where it needs to go.

"It's all in their hands now," says Hickman. "They can integrate from different sources and push content into different components. Before, it took a programmer to do all that. What might have taken a day before now takes less than 15 minutes."

A graphic artist develops content, and the team juggles emerging content from their suppliers, like concessionaires and various departments within the airport. The new plug-and-play method is more nimble, and allows for faster updates.

"Now, they don't have to go to three and four different places to change something on the system," says Shevrin. "They're empowered and encouraged to change all of those things themselves."

### Music City System

The airport was intent on having a PA system that would not only provide standard announcements, but also convey the local culture.

In addition to playing celebrity recordings from local musicians like Kellie Pickler, George Strait and the Band Perry, the new Simpleway platform has a custom voice library recorded by a Nashville native for more routine announcements. The project team wanted to ensure that up-to-date flight information and important airport announcements were delivered in a clear and consistent manner.

"The audio announcements are shared through a data interface for visible display so every passenger can receive the same information," adds Brandy Bailey, North America director for Simpleway. "The visual display integration also aids in emergency situations, so that all passengers understand the steps necessary to get to a safe location."



BRANDY BAILEY

### Making it Work

International Display Systems, the prime contractor/systems integrator for the overall project, leveraged its previous FIDS experience at BNA to make the more recent upgrades. In addition to upgrading and integrating the EVIDS, content management system and public address system, it also layered in the new Omnivex system.



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"The existing PA system was past its rated lifecycle and in need of replacement. Further, the airport authority had a vision to fully integrate the EVIDS, content management system and public address system for ADA compliance and customer service excellence," explains Rob Keelor, vice president of International Display Systems. "The primary challenge was to migrate the legacy FIDS and public address systems to the new EVIDS, content management system and public address system in a fully-operational airport without any disruptions. This transfer was accomplished by mirroring the databases of the old FIDS and new EVIDS/CMS to allow them to operate in parallel, supporting both the legacy and new systems simultaneously and without interruption."

When new links were confirmed, the project team switched over the input sources and interfaces in one shift and decommissioned the old FIDS servers. The public address system was a little more challenging because the new system is network-based, while the old system had a proprietary serial interface. Technicians consequently put the new PA system rack equipment and network microphone stations in the new EVIDS/content management system/public address system backbone while new speakers and cables were being installed, and then tied the new speakers and speaker cables to existing PA system.

"Once all equipment was installed and operational, we transitioned the PA system around-the-clock over the course of one work week," Keelor explains. "This allowed us to essentially transition one concourse per night. The next morning, we were ready to train the users on the new system. We supported both old and new systems so there was no loss of operation."

### Dueling Projects

Last year, 18.2 million passengers traveled into and out of BNA—14.2% more than in 2018. And BNA expects passenger traffic to increase from 18 million to 23 million as the city continues to grow.

With nearly \$1.4 billion of capital projects, BNA Vision is the airport's game plan to keep pace with the growth. Major components of the program include:

- a redesigned main lobby;
- on-site hotel;
- additional parking garage with pedestrian plaza;
- more than 90 retail, concessions and passenger services locations;
- 10 additional security screening lanes;
- and a new International Arrivals Facility.

The massive expansion and improvement initiative is slated to wrap up by the end of 2023.

"We had already started the [flight information and public address systems] project, and the rest of the organization was working on the BNA Vision project," says Hickman. "We had to make sure construction stayed ahead of us. When we started this project, there was a plan to build a new data closet to support what we were doing, and then we had to move it. I didn't want to get in the way of the BNA Vision project, so we had to stay ahead of it. And because we laid the footprint, we were able to adapt."

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The information/communication systems project had to adjust several times because of other construction schedules; other times it took priority. The successful outcome of this project was based on the cooperation between airport staff and third-party vendors, says Arora's Shevrin.

"Everyone worked together to ensure staff flexibility so that each piece was installed and ready according to the changing construction schedule," he says.

Due to other simultaneous construction, the project was installed in phases, and an expansion is planned for the new areas still being built. The new virtual servers were installed first, followed by workstations as the new system became available.

### Choose Wisely

Speaking from the airport's perspective, Hickman stresses the importance of having strong, reliable contractors and vendors for such projects.

"I'd advise you to pick your partner wisely and do your research. And stay in touch with the business side," she adds. "I'm from IT and like the cool technology; so I have to make sure that it also fits the business."



To	Flight #	Gate	Time	Status
Dallas (Love)	Southwest 1727	C14	7:25 A	Boarding
Dallas (Love)	Southwest 211	C21	11:05 A	
Denver	Southwest 1354	C4	8:10 A	
Detroit	DELTA 2692	B4	8:50 A	
Detroit	Southwest 2551	C22	9:30 A	
Detroit	DELTA 2644	B4	11:45 A	
Ft.Lauderdale	Southwest 2011	C25	7:35 A	Boarding
Ft.Lauderdale	Southwest 2401	C18	9:10 A	
Ft.Lauderdale	Southwest 652	C7	10:10 A	
Houston	UNITED 259	A4	8:50 A	
	UNITED 6010	A4	11:10 A	Delayed
		C19	8:30 A	

Designers used color, type style, horizontal banding, etc. to help passengers find the information they need.

On that note, Shevrin says that the lifecycle will be long for the airport's new FIDS, EVIDS and PA system—at least a decade or more. "Any new audio or visual systems brought on as part of the Vision program will be built onto the system," he says. "We set the standard for many years to come." ✈️

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