

Case Studies

Buffalo Public Schools Buffalo, N.Y.



With a new transportation contract effective in the fall of 2010, Buffalo Public Schools District has equipped its entire fleet of 630 buses with the SafeGuard® Integrated Child Seat (ICS) and 20 percent of its fleet with the SafeGuard FlexSeat®. Through a phase-in schedule, by the 2014-2015 school year, all buses will be equipped with FlexSeat, offering lap-shoulder belt protection to all student riders.

The Bid Process

Former Buffalo Assistant Superintendent John Fahey managed the bid process that led to equipping the fleet with belted seating. A key goal of the bid was to create specifications that provided for the highest levels of safety, service and efficiency for children being transported. The decision to include lap-shoulder belts on the Buffalo fleet started with Fahey's experiences investigating school bus accidents.



"Now that I see SmartFrame in action, I think it's brilliant. In a crash, the seat back stays there for the unbelted kid so he has compartmentalization protection."

Al Diamico

"I have witnessed firsthand how compartmentalization works, but during the course of my investigations, I saw way too many accidents where the kids were jostled around the compartment, and I wish they had been restrained," Fahey explained. "There's a longstanding dichotomy about seat belts in this industry. Seat belts are everywhere else. That never sat well with me."

The new seating technology was specified as part of a recent transportation bid. The district's incumbent contractor was the successful bidder, retaining its long standing partnership with the Buffalo Schools.

The result was ideal according to Fahey. "Among the benefits, our children get to be transported in state-of-the-art buses with all the newest technology. And in the end, transportation costs to the school system actually decreased because of the competitive nature of the bidding process," he said.

Improved Protection

Buffalo Director of Transportation Al Diamico says the startup has gone very smoothly.

"We had the best start-up ever. It all came together, and we're very pleased with the service being provided by our contractor," he said. "Drivers I've interacted with appreciate the lap-shoulder belts because they know where the students are – in their seats and safe. When students are belted, and they have seating assignments, we're finding that they are getting into less trouble with other students."

Diamico says SafeGuard SmartFrame™ gives him a sense of assurance about the safety of children riding the buses.

"I never realized the technology it would take to put a lap-shoulder belt on a school bus seat," Diamico explained. "Now that I see it in action, I think it's brilliant. In a crash, the seat back stays there for the unbelted kid so he has compartmentalization protection."

Integrated Child Seats

Before Buffalo Public Schools equipped 100 percent of buses with the Integrated Child Seat (ICS), Fahey says the district used child seats for transporting preschool-age children.

"We were forced to use standard car seats, fishing the lap belt of the bus through the back of the seats to secure them," Fahey explained. "We found child seats to be awkward and difficult to use, and we were never able to be fully confident they were always installed properly." Diamico says ICS has worked very effectively in the operation and has improved timeliness of the district's transportation services.

"The ICS seat is absolutely easy to use since the seats are built into the bus," he explained. "It's changed our operations because we're not lugging car seats across the yard anymore. Every single bus has what we need, so the buses get out there on time."

IMMI Support

Before Buffalo Public Schools implemented belted seating at the beginning of the 2010-2011 school year, IMMI played an advisory role in helping the district succeed with the project. IMMI staff provided training for technicians on ICS seat installation in existing buses and on maintenance procedures for all seats, as well as working with trainers and managers to provide instruction on proper seat usage and usage policies.

SafeGuard 

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Palmdale School District Palmdale, Calif.

Palmdale School District, 45 miles northeast of Los Angeles, runs 60 Type 1 and Type 2 buses, transporting approximately 20 percent of the district's 23,000 students. The first bus with SafeGuard seats was added to the fleet in 2004, when California began requiring belted seating on all new school buses.



"[Our driver] was almost at the point of quitting because the kids wouldn't behave. After she got the bus with lap-shoulder belts, she wasn't having discipline issues any more, and she stayed."

Sherilyn Thacker

In 2001, Palmdale School District conducted a two-part pilot program with IMMI, first replacing lap-belt only seats on a special needs Type 2 bus and later replacing standard school bus seats on a transit bus with SafeGuard seats.

A Natural Fit

In the fall of 2009, the district added six more buses to the fleet, which was used exclusively for field trips and out-of-town activities. The SafeGuard FlexSeat was the product of choice.

Transportation Director Sherilyn Thacker said FlexSeat was a natural fit for the new fleet.

"Our first bus was equipped with 3/2 SafeGuard seating, and we made that work," she said. "But when I saw FlexSeat, I thought it was a great design that makes a lot of sense. It gives us the ability to offer 69 belted seats on a conventional bus. With our first belted bus, we lost capacity and went from transporting 84 students on a bus to transporting just 55."

Proof in Testing

Within the past five years, Thacker has witnessed two school bus seat sled tests at IMMI.

"That gave me a different perspective," she said. "I could put the face of any one of my kids – and I have 23,000 of them – on one of the ATDs, and watch them fly out of their seat unrestrained. Belted seating was a no-brainer at that point."

Other benefits of belted seating mentioned by Thacker included faster loading, lower noise level and significantly reduced discipline issues.

"When we did our pilot back in 2001, we put the lap-shoulder belted seats on a bus with one of our best drivers," she recalled. "Jayne was almost at the point of quitting because the kids wouldn't behave. After she got the bus with lap-shoulder belts, she wasn't having discipline issues any more. And she stayed."

In advance of implementing lap-shoulder belts on the first bus in 2001, the school district sent letters to parents about the change in transportation.

"One of the reasons I knew we had been successful was that the letter

didn't spur a lot of feedback from parents," she said. "I did get the question, 'Why isn't my kid on that bus?'"

Budget constraints limit the ability of the school district to add belted seating to more buses in the near future.

"I feel badly we can't provide every kid with the best that's available," Thacker said. "The reality is that walk zones have increased significantly, and our fleet is aging. We were able to get these latest additions to our fleet because the school district refinanced some debt. We feel like we were able to get a lot for our money with this new addition to our fleet."

Dallas County Schools Dallas, Texas

As of June 2009, Dallas County Schools, which operates the fifth largest school bus fleet in the U.S., had more than 100 buses equipped with belted seats, about half of them 19-passenger buses and the other half 77-passenger buses.



"Safety of our children is the most important consideration. We take it seriously and have made an absolute commitment."

Larry Duncan

A year earlier, the progressive Dallas County School Board made the decision to outfit all new school buses with belted seats before Texas seat belt legislation takes effect. Using local funding until state funding is available, the school system made a commitment to continue equipping its fleet until every student on its 1,650 buses is transported in a belted seat.

As president of the Dallas County Board of Trustees, Larry Duncan led the effort to equip buses with lap-shoulder belts, working collaboratively with school board leaders and members of top administration.

"Safety of our children is the most important consideration. We take it seriously and have made an absolute commitment," Duncan said.

Duncan explained what drove him to initiate the charge toward belted seating.

"Common sense and life experience tells me that our children need seat belts when they're traveling in a moving vehicle," he said.

Replacement seating is a part of the school system's program as well, with 37 of existing buses in the fleet now outfitted with belted seats.

"We couldn't get it done fast enough if we only equipped new buses," Duncan explained. "By retrofitting, we accelerate the pace of equipping the entire fleet."

Bartholomew County Consolidated School Corporation Columbus, Ind.

A New Idea

When Transportation Director Monica Coburn walked into the SafeGuard® booth at the 2007 NAPT trade show, the future of her school bus fleet changed forever. While at the show, she learned about the SafeGuard FlexSeat®, which eliminates the capacity issue and protects both belted and unbelted students through its SmartFrame™ technology, something that turned Coburn's head.

"When I saw the SafeGuard FlexSeat, I was impressed with the construction itself," Coburn said. "What if that child behind doesn't have a seat belt? And the SmartFrame technology made sense."

SmartFrame among other benefits eventually led to the Bartholomew County Consolidated School Corporation beginning the process of implementing lap-shoulder belts on its buses, following a visit from IMMI managers at a school board meeting where the seats were approved. Today, the school corporation, 50 miles south of Indianapolis, operates 113 school buses and transports approximately 11,000 students. So far, six of the buses are equipped with FlexSeat, and plans are to gradually outfit the entire fleet with lap-shoulder belts as new buses are purchased.

Getting Approval

The approval for the seats didn't come easily at first, with Transportation Safety Coordinator Bob Downin initially against lap-shoulder belts on school buses because of his experiences with students using lap belts as weapons. However, after Coburn demonstrated FlexSeat and its retractable lap-shoulder belts, as well as explained how SmartFrame technology works, Downin changed his mind.

"The whole standard from day one was... If they're sitting in their seat, if they were sitting there properly and we had an accident, they were going to be protected," Downin explained. "But that theory does not work, because they don't stay in their seats."

Both Coburn and Downin agreed that SmartFrame technology had a competitive advantage by offering protection for both belted and unbelted students.

Implementation

Coburn and Downin worked closely to communicate with students and parents about the implementation of belted seating. They sent letters to families, explaining their expectations for students to wear the belts. A local newspaper published a feature article about the new equipment,



"Kids were off the walls with no seat belts. With the seat belts, discipline has been reduced by 90 to 95 percent."

Monica Coburn

which raised the profile of Bartholomew County's decision to move to belted seating. Drivers and students were offered a training session during which they learned how to use the seats properly. Coburn says students found the seats were intuitive and easy to use, and within three days, they were helping each other buckle their lap-shoulder belts.

Response

Coburn says the feedback from parents was overwhelmingly positive.

"Parents were calling me and asking, 'When will my kid be on the bus with seat belts?'" she explained.

Drivers who were initially against the transition to belted seating were concerned about the time, trouble and responsibility of getting the children belted. After a short time, however, they found children were buckling up themselves or getting help from neighboring students. Drivers also noticed a dramatic change in student behavior and noted reduced distraction. The students were staying in their seats because of the lap-shoulder belts.

"Kids were off the walls with no seat belts," Coburn explained. "With the seat belts, discipline has been reduced by 90 to 95 percent."

When the transportation office reported results to the school board, they used on-board video taken directly from one of their buses.

"We took a video out of a bus that was before the seat belts and then when we got the new seat belt bus, it's the same kids, the same driver, the same situation, except it's a bus with and without seat belts," Downin explained. "And we think it's a dramatic difference."

When Coburn looked at the cost of putting the belted seats on her buses, she realized that air conditioning was around the same price. She questioned "Which one truly is the safety aspect?"

"So when you're figuring out where you're going to go and what you need to do, to me it was a no brainer," Coburn said. "You take the air conditioning and set it aside, and you go with the seat belts."



Why SafeGuard?

Proven to Perform

SafeGuard bus seats undergo the most rigorous testing in the transportation industry. Over the past decade, IMMI engineers have conducted the following tests on buses to gain a full understanding of bus occupant protection:

- 12 full barrier crash tests
- More than 200 sled tests
- 20 rollover tests

SafeGuard bus seats are tested and capable of meeting applicable sections of FMVSS 208, 209, 210, 213, 222 and

225 federal regulations. Since NHTSA has required FMVSS 210 compliance on every U.S. vehicle platform where it has ruled, SafeGuard bus seats are designed and tested on OEM platforms to meet this standard.

With an ongoing commitment to thorough testing during the product development process, IMMI delivers innovative seating and restraint systems that have been proven to consistently meet or exceed applicable federal and state requirements.



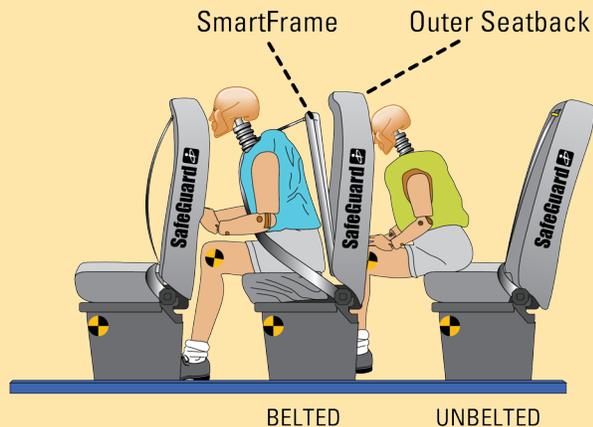
School Bus Seat Testing

SmartFrame™ Technology

With lap-shoulder belts and exclusive SmartFrame™ technology, SafeGuard school bus seats offer full compartmentalization protection in frontal crashes for unbelted passengers. The seat has two structures.

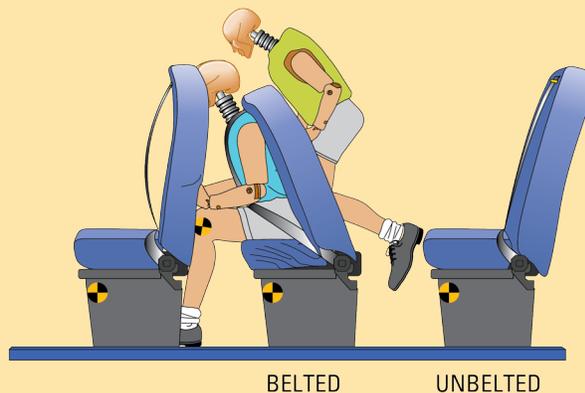
The inner structure provides lap-shoulder belts and absorbs crash energy for the belted passenger, while the outer seatback structure remains upright to cushion anyone in the seat behind who isn't wearing a seat belt.

With SmartFrame



Full compartmentalization helps contain unbelted passengers in frontal crashes.

Without SmartFrame



Seating without SmartFrame leaves unbelted passengers vulnerable to forward momentum.

Equipped with exclusive



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