



Image courtesy of United Streetcar

United Streetcar's simulation of its new vehicle, soon to arrive in Portland, Oregon.

By Scott Bogren

Revisioining the American Streetcar

The backbone of the nation's streetcar system that moved millions of Americans in large cities and small towns alike in the first half of the 20th Century were sturdy, workhorse cars built by such historic companies as Brill, the St. Louis Car Company, Perley Thomas and Pullman Standard. But by 1970, there were no streetcar manufacturers left in the U.S. Today, just as streetcar operations and systems have found new life and support in the modern passenger rail renaissance, so have the cars that make the service possible. Portland, Oregon's wildly successful streetcar

system, introduced the European Skoda streetcar to North America, and launched an American company to build an American streetcar.

As an increasing number of communities of all sizes around the nation look at streetcars as a cost-effective way to both move people and build local economic development, a sleek, modern American-built vehicle is now available. United Streetcar's new 10 T3 Streetcar is built with the Skoda design in Clackamas, Ore.

"What makes our streetcar unique is that it's a modern design offering

all the amenities of a new vehicle," says United Streetcar President Chandra Brown. "It's not a heritage vehicle built on nostalgia, it's a modern one with full accessibility and its already running on the streets of Portland."

United Streetcar is a recently formed subsidiary of Oregon Iron Works that won exclusive rights to build the modern Skoda streetcar in the United States. The car is fully compliant with the Buy America Act as it includes more than 70 percent domestic content and is totally assembled in the U.S. Two years ago, Oregon Iron Works completed the

contract – an exclusive technology transfer – with Skoda, located in the Czech Republic.

“We see a market for this modern streetcar, as more and more cities look to fight congestion and have rail play a role in local economic development,” says Brown.

Oregon Iron Works: Well-Suited to Build Streetcars

Oregon Iron Works was founded in 1944 and has an extensive history in the fabrication industry for hydroelectrics, bridges and other large civil construction industries. The company also specializes in marine, nuclear and aerospace technologies. Most recently – in addition to its streetcar – Oregon Iron Works has received acclaim for its ground-breaking work on power-generating marine buoys.

“We’ve always been in transportation, and we’re always looking for emerging markets – which led us to the streetcar,” says Brown of Oregon Iron Works. “As urban areas look to reduce carbon emissions and build mobility alternatives, we think the streetcar is going to be an increasingly sought after solution. That’s why representatives from more than 60 different cities have come out to see what the streetcar has done for Portland.”

One of the keys to Oregon Iron Works’ ability to produce streetcars here in the U.S., is that it can withstand the understandable fluctuations that will come with an emerging market like streetcars.

“The company has enough work and projects underway that it isn’t dependent upon a certain number of streetcar orders. We have a big and diverse job shop, so we don’t have to have the line running for any specified duration in order to survive financially,” says Brown. “If we win three car orders one year, 30 the next and then seven the following year, we can handle it.”

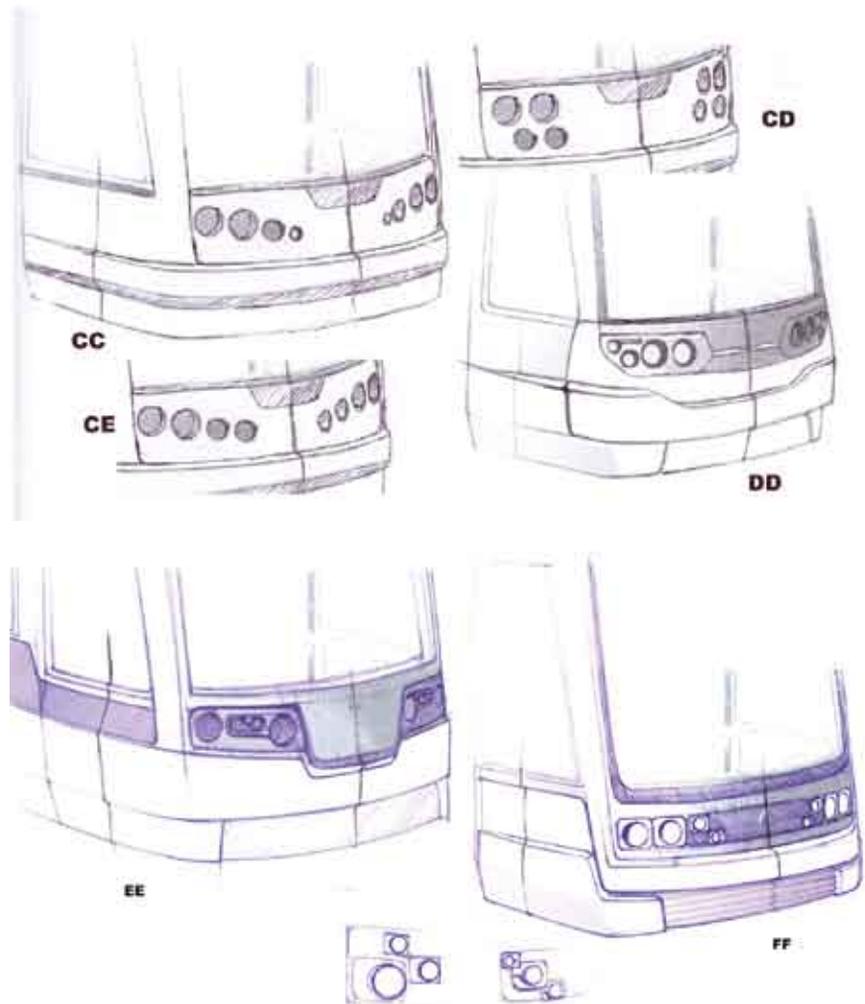
Oregon Iron Works also offers its

streetcar team the very real benefit of an established local, national and international supplier network and its half a century of experience in producing transportation prototypes.

The United Streetcar will draw its power from an overhead catenary system to its electric motors. The 66-foot cars will have a seating capacity of 30 and a maximum seating/standing capacity of 170 passengers. Top speed for the streetcars will be 44 mph.

“We have the vision, the experience and a great supplier network that is used to working with us on such things as innovative propulsion systems and electronics,” says Brown. “It’s ideal for United Streetcar.”

In order to meet the market demand for an American streetcar,



United Streetcar’s design has undergone a number of iterations and variations as they prepare the new streetcar for its late 2008 introduction on the streets of Portland. In these schematics, various front-end prototypes that United Streetcar has explored are shown.

Oregon Iron Works turned to Skoda and its proven streetcar design that is prevalent in Europe.

“We do have a lot of experience and expertise in building innovative vehicles here,” says Leon Kaunitz, one of Oregon Iron Works’ engineers. “But our exclusive arrangement with Skoda really gives us a competitive edge.”

Skoda’s Experience Benefits Portland

Skoda’s origins trace back to the mid 1800s as an arms manufacturer for Austria-Hungary. After World War I, the company merged with a smaller group that had begun building and repairing bicycles in the 1890s and moved into producing cars by 1905. In World War II, Skoda

Works produced military weapons. The company was nationalized as part of the Communist rule of Czechoslovakia and its name was even changed in 1951 to the Vladimir Lenin Plants – a name change that resulted in loss of sales and a return to the familiar Skoda moniker two years later. With the onset of the 1960s, Skoda began to produce a series of streetcars (known in Europe as trams) and trolley buses that initially found markets in Eastern European states and, eventually in other European cities, too, as the company successfully transitioned into a free-market enterprise.

As Portland began to look at streetcars in the early 1990s, leaders at Portland Streetcar Incorporated looked to Skoda to build a modern, fully accessible streetcar, the first five of which arrived for training and testing in the spring of 2001. Service began later that year and was extended in 2005 and 2006.

Today, service runs along an 8-mile continuous loop at 14-minute intervals during peak periods and runs right along the city streets in mixed traffic.

Thus far, the system has exceeded all expectations in both ridership and in instigating local economic development. Now averaging more than 6,000 boardings a day, local officials estimate that the Portland Streetcar has played a meaningful role in the more than \$1 billion of development that has taken place in the city's West End and Pearl Districts.

"The modern streetcar is aerodynamic and the Skoda design fits perfectly with modern city development," says Kaunitz. "The cars are quiet and clean."

"The new streetcars are designed to provide real transit and not just tourism trips," says Brown. "They're good business for a modern city."

One of the key elements in the Portland Streetcar's success is not

only its ridership, but the economic development it has spurred along the line. It has proven itself a lure to business and residential development.

"People look at it as an enhancement to their urban living," said Homer Williams of Portland's Williams and Dame Development to the American Public Transportation Association's Streetcar and Trolley website. "The streetcar is a very important piece, more so than anyone thought. It's been a very pleasant surprise... and is one of the things that differentiates Portland from other cities."

Says U.S. Rep. Earl Blumenauer who helped secure federal investment to the streetcar system in Portland: "This is how transportation money should be spent, to leverage jobs and economic development and help people."

(For more on Congressman Blumenauer, see RAIL #10 – ed.)

Portland currently operates a fleet of six streetcars built in the Czech Republic by Skoda. United Streetcar's first vehicle should join the fleet by the end of 2008.



Photo courtesy of Destination Freedom

The Emerging Market for American Streetcars

Building an Industry – Locally

The economic development impact of the Portland streetcar is not confined solely to the city. Oregon Iron Works and its United Streetcar subsidiary, headquartered in 20 acres in Clackamas just south of Portland, represents a significant asset to the regional economy. With 400 total employees, some 30 of which can be dedicated to the streetcar, the impact is substantial.

“In many ways, we’re creating a new industry in the U.S., and we’re basing right out of here,” says Brown. “And we’re going to build this car far differently than Skoda does.”

United Streetcar has divided its workforce into two teams of employees, one focusing on the prototype and the other on production. In each case, the commitment of the personnel and resources is significant.

“We’re creating jobs,” says Kaunitz.

There’s also a major impact on local suppliers. Because Oregon Iron Works has more than half a century of experience, it has established arrangements with both a local and national supplier network. The Buy America regulations stipulate 60 percent domestic content – the United Streetcar currently stands, according to the company, at over 70 percent.

Currently, the first United Streetcar will be finished by the end of the year, and will serve immediately in Portland on the existing line. United Streetcar hopes to have contracts for additional units with other cities soon. Officials will only say that the company is participating in a variety of competitive situations.

“We hope to land a couple of contracts soon,” says Kaunitz. 

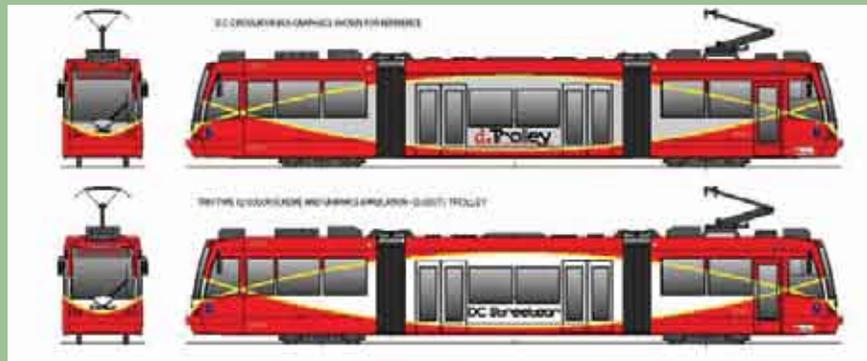


Image courtesy of the District Department of Transportation

Based on the success achieved by new streetcar systems in Portland, Tacoma and now Seattle, a new set of communities in the United States and Canada are exploring modern streetcar operations to expand their transit networks. That positions United Streetcar and other manufacturers to respond to a new and powerful market for streetcars.

- Arlington, Va.: Arlington County, in conjunction with neighboring Fairfax County, is conducting engineering and design work on a 4.7-mile line to connect the Pentagon City Metrorail station with Lincolnia in Fairfax County.
- Cincinnati, Ohio: Under an ongoing study, the city of Cincinnati is investigating a system linking downtown Cincinnati and the Over-the-Rhine neighborhood, which could produce over 5,000 daily riders and generate more than \$1 billion in development.
- Columbus, Ohio: Led by a local working group, the City of Columbus is considering a streetcar service to connect several city neighborhoods and business districts along High Street and other thoroughfares.
- Grand Rapids, Mich.: A consultant is currently undertaking a feasibility study on a 2.4-mile downtown circulator route.
- Indianapolis, Ind.: Local business and civic leaders have formed the Downtown Indianapolis Streetcar Corporation to study the feasibility of a system for the city.
- Miami, Fla.: To augment the region's Metrorail, Metromover and Tri-Rail systems, the City of Miami is exploring a new service to link downtown Miami and Miami Beach.
- Portland, Ore.: The undisputed trend-setter in American streetcars is moving forward to expand its streetcar network by adding a new loop on the east side of the Willamette River, connecting to the existing line.
- Toronto, Ontario: Having never abandoned their extensive 118-mile streetcar network, Canada's largest city is undergoing a program to purchase 204 new streetcars while also planning to improve the streetcar infrastructure to allow vehicles to move easier through city streets.
- Washington, D.C.: The District's Department of Transportation is installing streetcar rails on H Street in northeast Washington in advance for a future route between Benning Road and Union Station. It is also moving forward with plans for a line on the city's south side to link the Anacostia Metrorail station and Bolling Air Force Base.